

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	Title Sheet
2	Typical Sections
2A	Summary
3	Plan

Proj. No. 18301-18352 Inc.1
44657-14440

STATE OF OREGON
STATE HIGHWAY DEPARTMENT
PLANS FOR PROPOSED PROJECT

YOUNGS BAY BRIDGE SECTION OREGON COAST HIGHWAY CLATSOP COUNTY				SHEET NO. 1
FED. ROAD Dist. No.	STATE	PROJECT NUMBER	FISCAL YEAR	TOTAL SHEETS See Index
8	OREGON	UPH514		

YOUNGS BAY BRIDGE SECTION
OREGON COAST HIGHWAY
CLATSOP COUNTY
DECEMBER, 1962



CONVENTIONAL
SIGNS

- State Line
- County Line
- City or Town Limits
- Township Line
- Section Line
- Correlation Land Claim Line
- Fence Line
- Guard Rail
- Unfenced Property or
- Sight of way Line
- Existing Roads
- Trails
- Road or Survey Line
- Railroads
- Retaining wall
- Culverts
- Drainage
- Drainage Pipe
- Power Pole
- Telephone or Telegraph Pole
- Marsh
- Irrigation Ditches
- Bridge
- Trees



[Signature]
STATE HIGHWAY ENGINEER

STATE HIGHWAY COMMISSION

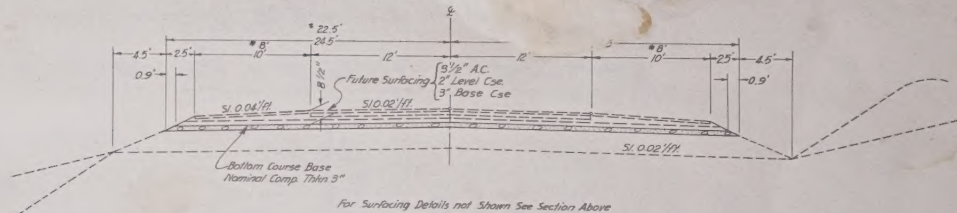
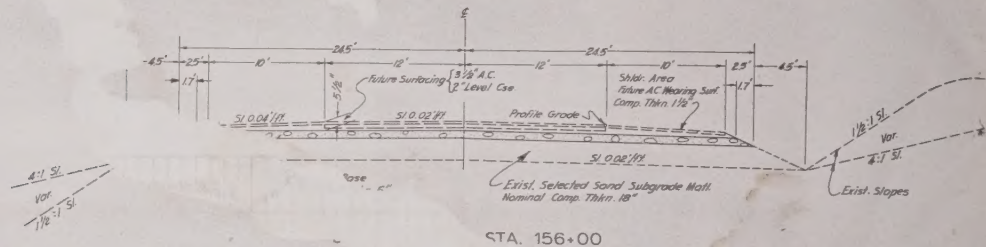
Glenn L. Jackson, Chairman
Kenneth N. Frutley, Commissioner
David B. Simpson, Commissioner

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

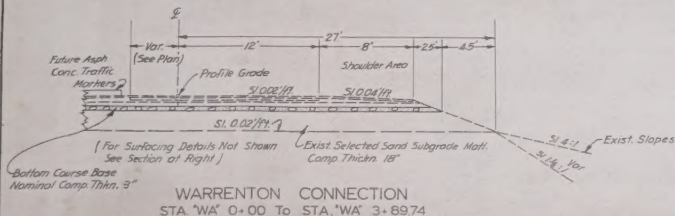
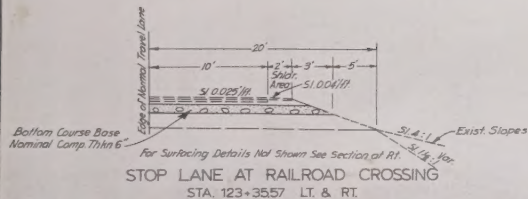
APPROVED:

DIVISION ENGINEER DATE

YOUNGS BAY BRIDGE SECTION				
OREGON COAST HIGHWAY				
CLATSOP COUNTY				
PRD. ROAD Dist. No.	STATE	PROJECT NUMBER	FISCAL YEAR	SHEET No.
8	OREGON	U-F-115(4)		2
				TOTAL SHEETS
				See Index



STA. 156+00.00 To STA. 174+76.45
 [EQ. 174+76.45 BK To 8+41.46 (Temp Conn.)
 *W 0+00.00 AH To *W 30+00.00 (Warrenton Conn.)



STA. 8+00 To STA. 17+00 RT.

S U M M A R Y

SCHEDULE 1A

Bents 1 thru 24 & f
Spans 1 thru 24
Alternate "A"

ITEM	UNIT	NET QUANT	ALLOW	TOTAL
Furnish 48-inch Prestressed Piling	Lin Ft.	5,708	-	5,708
Drive Prestressed Piles	One	54	-	54
Load Test Prestressed Piles	One	2	-	2
Class "A" Concrete	All	All	-	All
Class "A" Concrete	All	All	-	All
Class "B" Concrete	All	All	-	All
70 to 75 Modified Type III Prestressed Beams	One	16	-	16
75 to 80 Modified Type III Prestressed Beams	One	80	-	80
Metal Reinforcement	All	All	-	All
Metal Parapet Railing	Lin Ft.	3,790	-	3,790
Electrical Conduit	All	All	-	All

SCHEDULE 1B

Bents 1 thru 24 & f
Spans 1 thru 24
Alternate "B"

Furnish 48-inch Prestressed Piling	Lin Ft.	6,160	-	6,160
Drive Prestressed Piles	One	58	-	58
Load Test Prestressed Piles	One	2	-	2
Class "A" Concrete	All	All	-	All
Class "A" Concrete	All	All	-	All
Class "B" Concrete	All	All	-	All
70 to 75 Prestressed Tee Orders	One	20	-	20
75 to 80 Prestressed Tee Orders	One	100	-	100
Metal Reinforcement	All	All	-	All
Metal Parapet Railing	Lin Ft.	3,790	-	3,790
Electrical Conduit	All	All	-	All

SCHEDULE 2

Piers 1 & 2
Bents 25 to 26
Steel Truss Span
1,174 Span
Spans 27 to 28
Operating System

Remove Existing Pile Protection	All	All	-	All
Shoring, Cribbing, etc.	All	All	-	All
Structural Excavation	Cu Yd.	1,990	110	2,100
Structural Excavation Below Elevations Shown	Cu Yd.	-	300	300
Furnish 48-inch Prestressed Piling	Lin Ft.	744	-	744
Furnish Timber Piling	Lin Ft.	14,520	-	14,520
Furnish Treated Timber Piling	Lin Ft.	8,330	-	8,330
Drive Prestressed Pile	One	6	-	6
Drive Timber Piles	One	236	-	236
Drive Treated Timber Piles	One	119	-	119
Seal Concrete	Cu Yd.	104.7	53	157.7
Class "A" Concrete	All	All	-	All
Class "B" Concrete	All	All	-	All
50 to 55 Type III Prestressed Beams	One	12	-	12
55 to 60 Type III Prestressed Beams	One	2	-	2
Metal Reinforcement	All	All	-	All
Structural Steel	All	All	-	All
Metal Parapet Railing	Lin Ft.	206	-	206
Treated Timber in Place	M-FBM	39	-	39
Bridge Operating System, Complete	All	All	-	All

SCHEDULE 3A

Bents 27 thru 52 & f
Spans 29 thru 52
Alternate "A"

Furnish 48-inch Prestressed Piling	Lin Ft.	5,702	-	5,702
Drive Prestressed Piles	One	54	-	54
Class "A" Concrete	All	All	-	All
Class "A" Concrete	All	All	-	All
Class "B" Concrete	All	All	-	All
70 to 75 Modified Type III Prestressed Beams	One	16	-	16
75 to 80 Modified Type III Prestressed Beams	One	75	-	75
80 to 85 Modified Type III Prestressed Beams	One	5	-	5
Metal Reinforcement	All	All	-	All
Metal Parapet Railing	Lin Ft.	3,790	-	3,790
Electrical Conduit	All	All	-	All

SCHEDULE 3B

Bents 27 thru 52 & f
Spans 29 thru 52
Alternate "B"

Furnish 48-inch Prestressed Piling	Lin Ft.	6,160	-	6,160
Drive Prestressed Piles	One	58	-	58
Class "A" Concrete	All	All	-	All
Class "A" Concrete	All	All	-	All
Class "B" Concrete	All	All	-	All
70 to 75 Prestressed Tee Orders	One	20	-	20
75 to 80 Prestressed Tee Orders	One	100	-	100
Metal Reinforcement	All	All	-	All
Metal Parapet Railing	Lin Ft.	3,790	-	3,790
Electrical Conduit	All	All	-	All

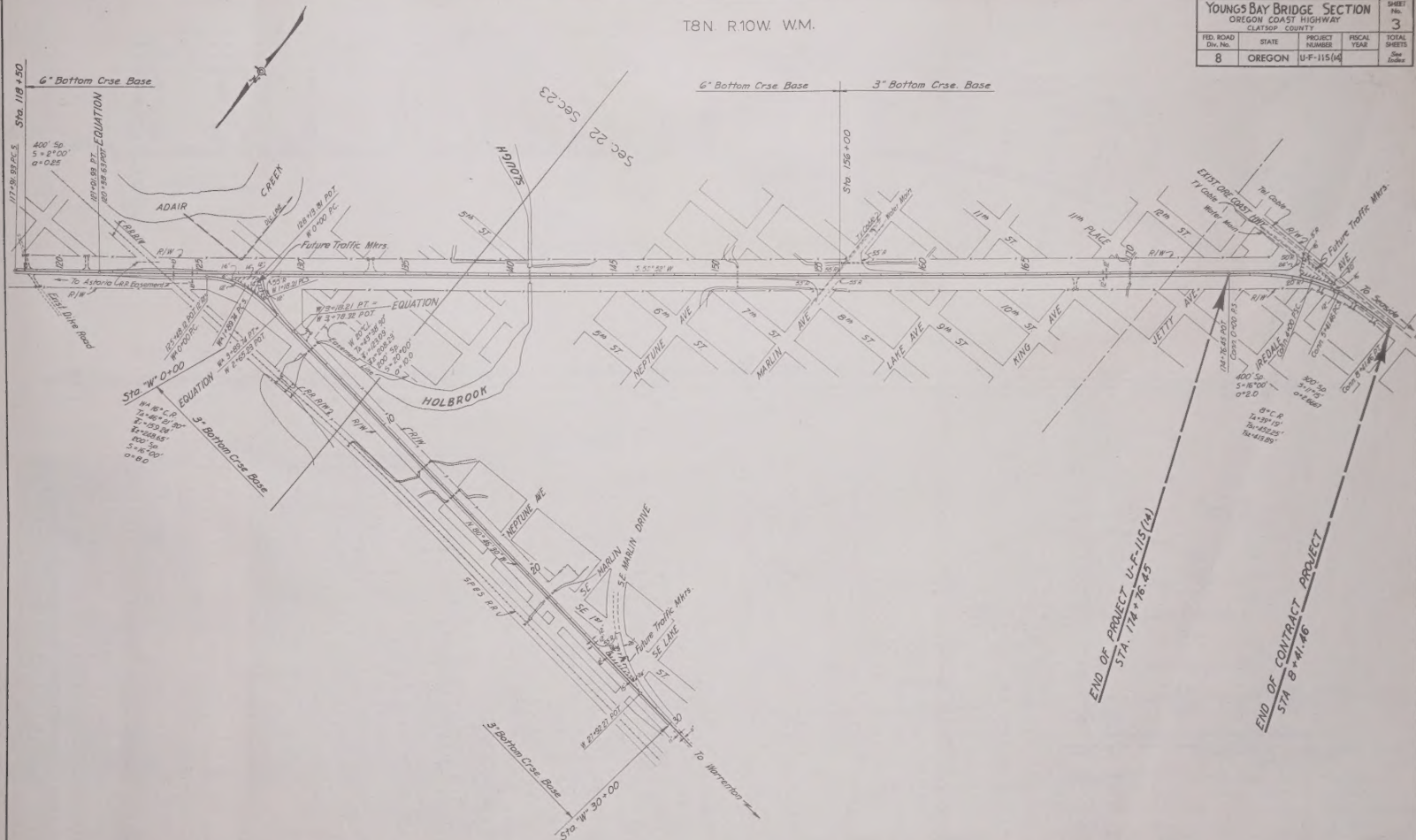
SCHEDULE 4

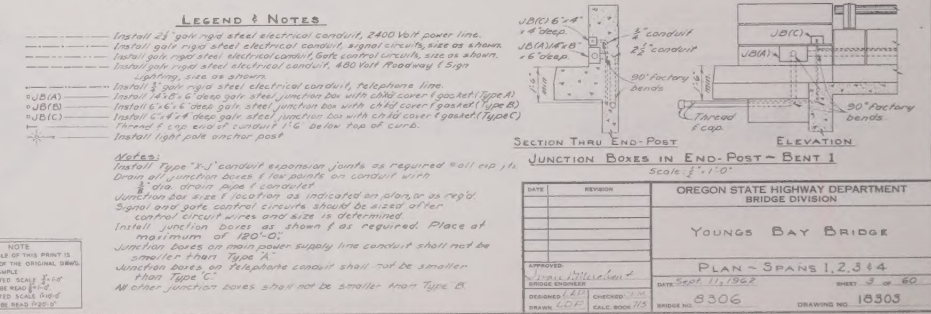
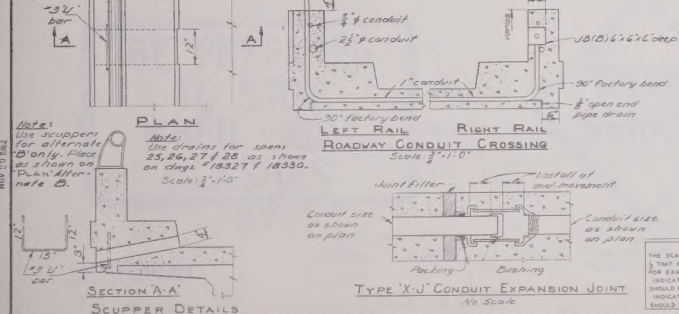
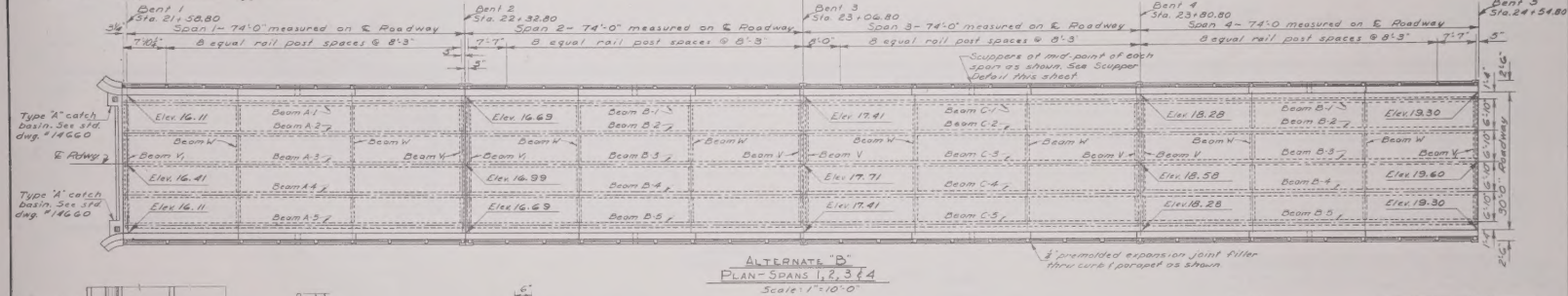
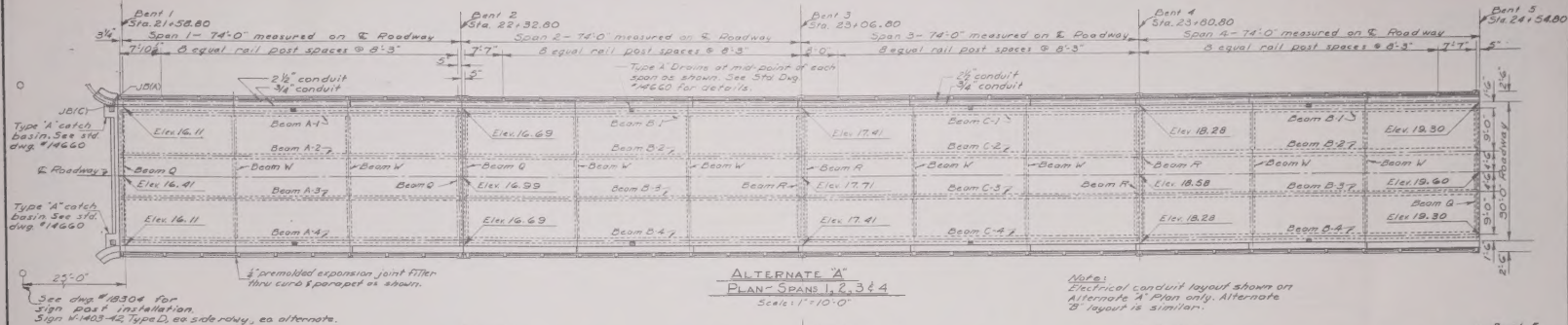
Roadwork

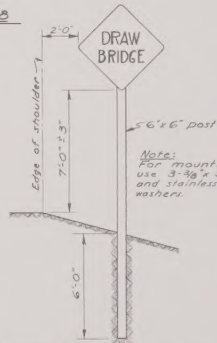
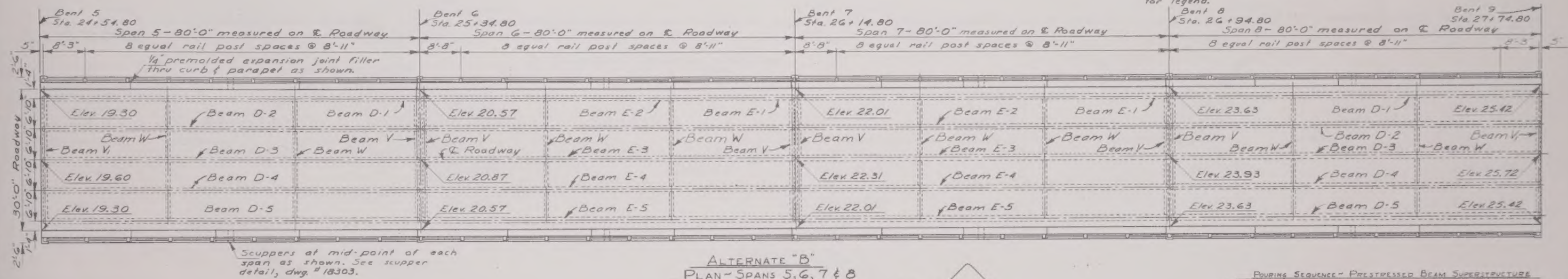
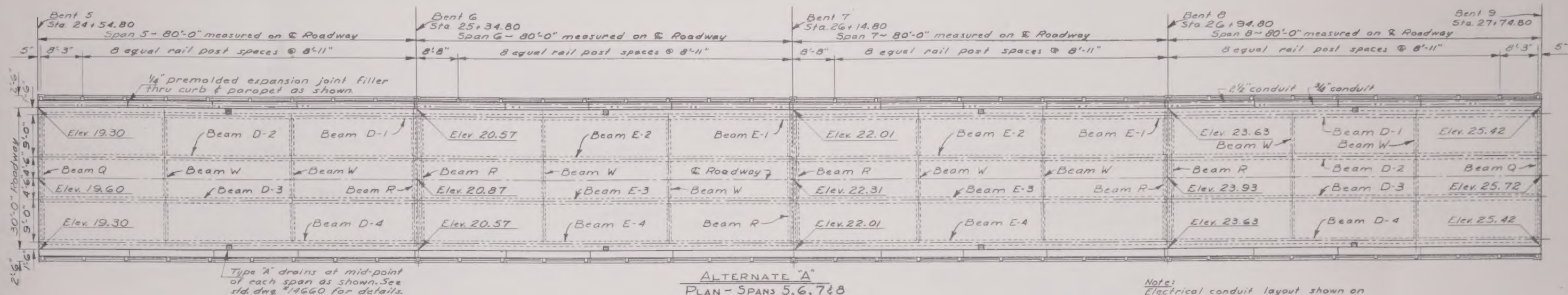
Loose Riprap	Cu Yd.	2,000	200	2,200
Sand Subgrade Material	Cu Yd.	1,800	200	2,000
Coarse Crushed Material in Base	Cu Yd.	8,900	610	9,500

T8N. R.10W. W.M.

YOUNGS BAY BRIDGE SECTION			SHEET No.
OREGON COAST HIGHWAY			3
CLATSOP COUNTY			
FED. ROAD Div. No.	STATE	PROJECT NUMBER	TOTAL SHEETS
8	OREGON	U-F-115(14)	See Index







PAVING SEQUENCE - PRESTRESSED BEAM SUPERSTRUCTURE

1. Pour deck and diaphragm beams. Deck and diaphragm beams shall not be poured until 60 days or more have elapsed after release of prestress in longitudinal beams.
2. Pour section between ends of beams. All framework for deck and diaphragms shall be removed before section is poured, and not less than 3 weeks shall have elapsed after completion of step 1.
3. Pour curb and handrail. Curb and handrail shall not be poured until 2 weeks have elapsed after completion of step 2.

Notes:

Steps 1 & 2 of the paving sequence apply to spans 2 thru 24 and spans 29 thru 31. Step 3 applies to spans 1, 25, 26 & 32. Curb & handrail shall not be placed on spans 1, 25, 26 & 32 until 2 weeks after completion of step 1.

2 REQUIRED, SEE DWGS.
NO. 18305 & 18312.

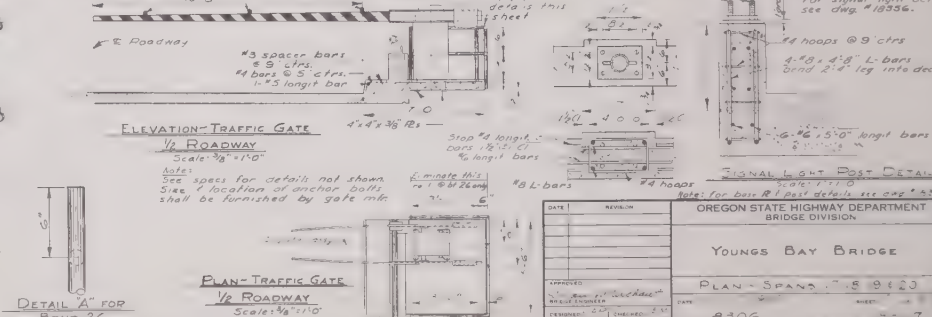
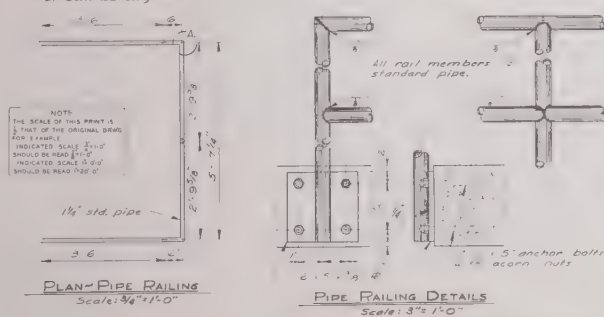
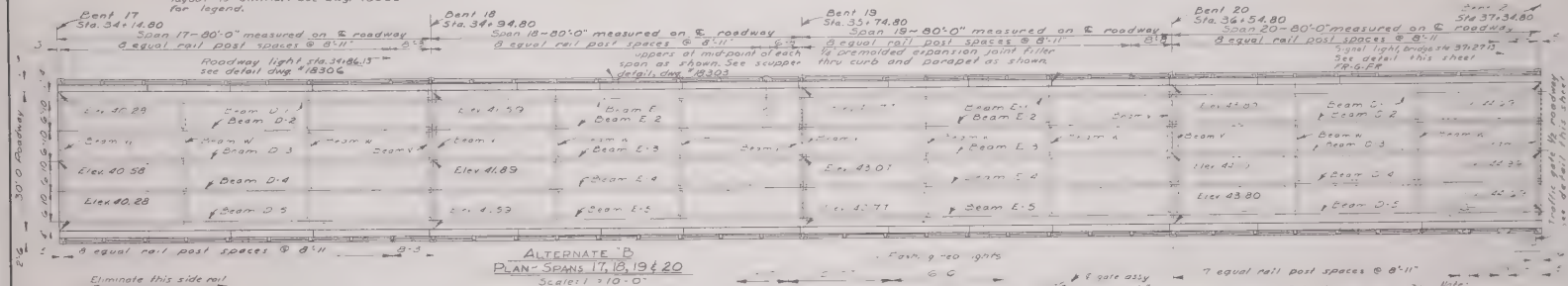
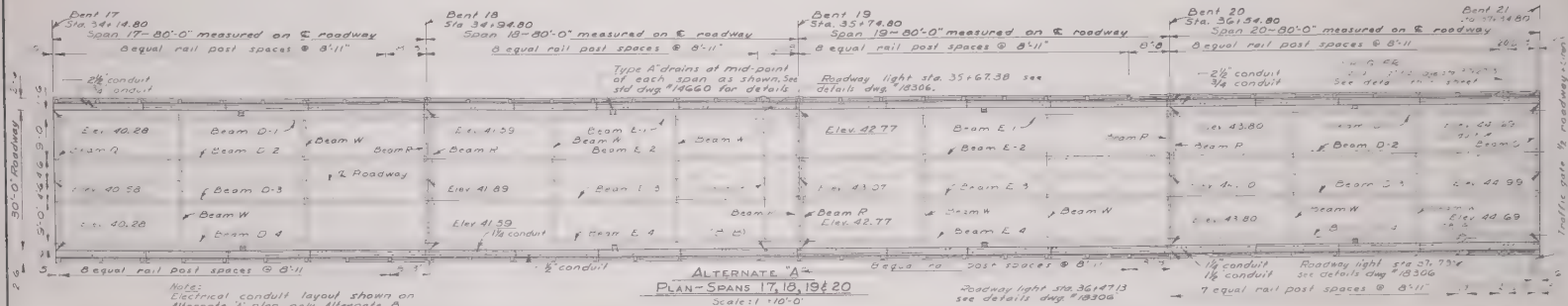
CORNER RADI 3"
BORDER 7/8"
MARGIN 3/4"

4 REQUIRED, SEE DWGS.
NO. 18303 & 18314.

SIGN DETAILS

"DRAW BRIDGE" SIGN INSTALLATION
Scale: 3/4" = 1'-0"

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
APPROVED: <i>William H. Hunsch</i>		PLAN - SPANS 5, 6, 7 & 8	
BRIDGE ENGINEER		DATE: 8/20/12/1962	SHEET: 2 of 20
DESIGNED: C. D. S.	CHECKED: T. C. H.	NO. 8306	DRAWING NO. 18304
DRAWN: C. D. S.	SCALE: 3/4" = 1'-0"		



APPROVED		DATE		SHEET	
DESIGNED BY	CHECKED BY	DATE	DATE	SHEET	OF
DESIGNED BY	CHECKED BY	DATE	DATE	SHEET	OF
DESIGNED BY	CHECKED BY	DATE	DATE	SHEET	OF

OREGON STATE HIGHWAY DEPARTMENT
BRIDGE DIVISION

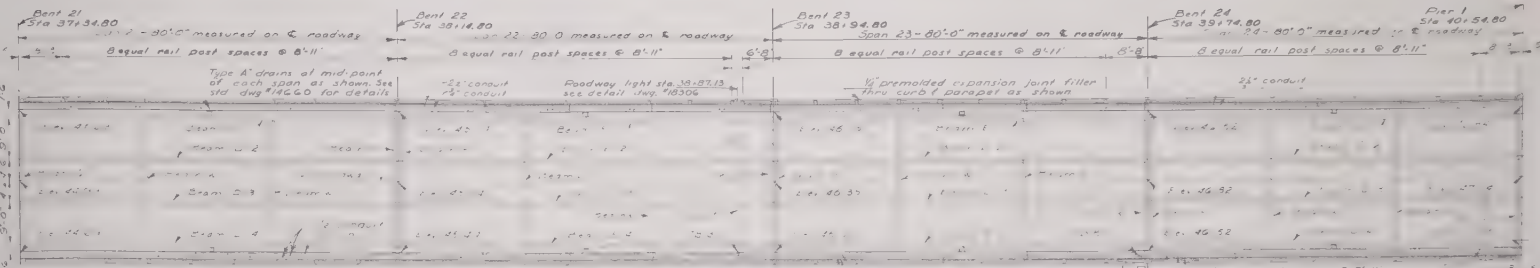
YOUNGS BAY BRIDGE

PLAN-SPANS 17, 18, 19 & 20

Scale: 3/4" = 1'-0"

Sheet No. 8306

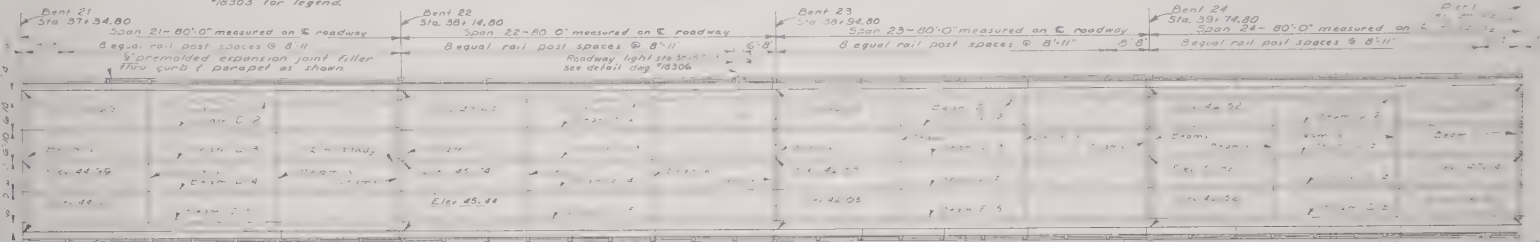
Drawn No. 7



Notes:
Electrical conduit layout shown on Alternate A plan only. Alternate B layout is similar, see dwg #8303 for legend.

ALTERNATE "A"
PLAN - SPANS 21, 22, 23 & 24
Scale: 1" = 10'-0"

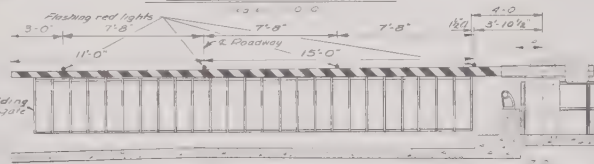
Full width traffic gate with folding fence, see detail this sheet.



Scupper of mid-point of each span as shown. See scupper detail, dwg #8303.

ALTERNATE "B"
PLAN - SPANS 21, 22, 23 & 24
Scale: 1" = 10'-0"

Full width traffic gate with folding fence, see detail this sheet.

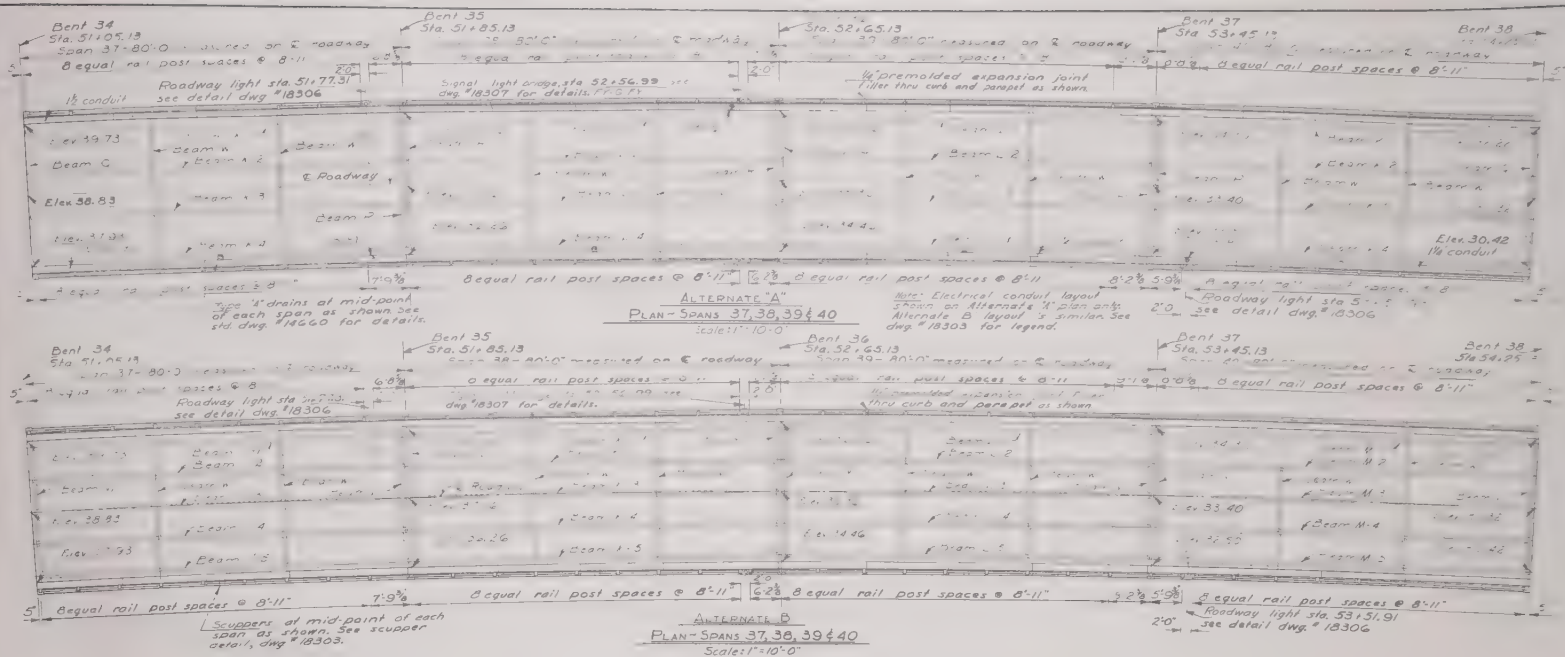


FULL WIDTH TRAFFIC GATE
WITH FOLDING FENCE
Scale: 1/8" = 1'-0"

Note:
For details not shown see detail of gate for 1/2 roadway width dwg #8307 & spec.

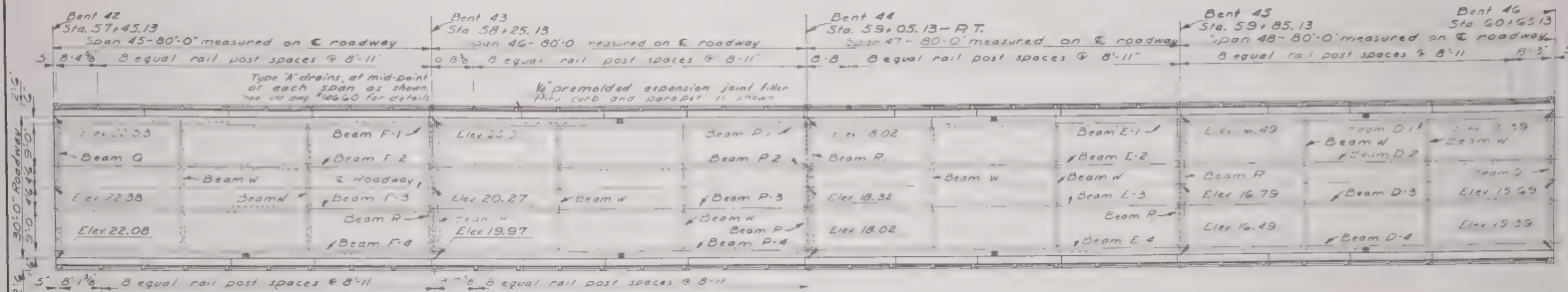
NOTE:
THE SCALE OF THIS PRINT IS 1/8" = 1'-0" OF THE ORIGINAL DRAWING. FOR EXAMPLE, INDICATED SCALE 1/8" = 1'-0" SHOULD BE READ 1/8" = 1'-0". INDICATED SCALE 1/8" = 1'-0" SHOULD BE READ 1/8" = 1'-0".

DATE: _____		REVISION: _____	
OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION			
YOUNGS BAY BRIDGE			
APPROVED: <i>[Signature]</i> BRIDGE ENGINEER		PLAN - SPANS 21, 22, 23 & 24 DATE: Sep 25, 1962 SHEET: 6 OF 60	
DESIGNED: J.P. DRAWN: L.P.	CHECKED: E.M. SCALE: 1/8" = 1'-0"	BRIDGE NO: 8306	DRAWING NO: 18308

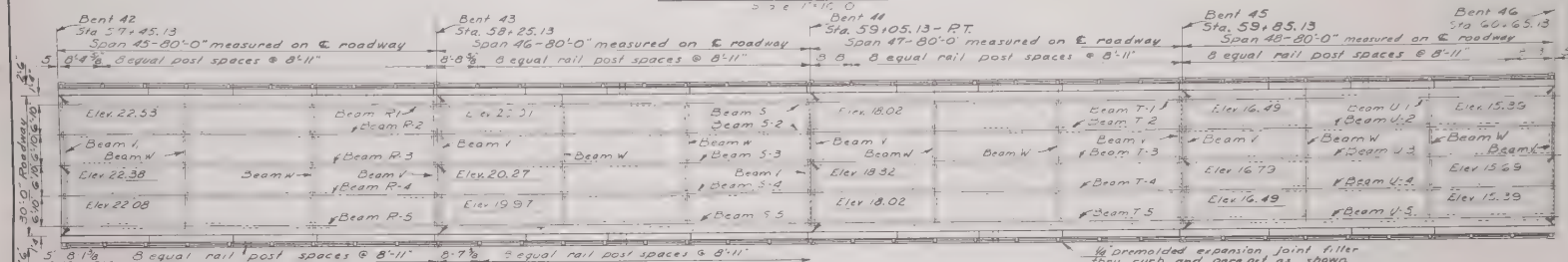


NOTE
 THE SCALE OF THIS PRINT IS
 1/4" OF THE ORIGINAL DRAWING.
 FOR EXAMPLE:
 INDICATED SCALE 1/4" = 10'-0"
 INDICATED SCALE 1/4" = 10'-0"
 INDICATED SCALE 1/4" = 10'-0"

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
DESIGNED BY	Checked	PLAN - SPANS 37, 38, 39 & 40	
BRIDGE ENGINEER	DATE Oct 2, 1962	SHEET 2 OF 20	
DESIGNED BY	Checked	PLAN - SPANS 37, 38, 39 & 40	
BRIDGE ENGINEER	DATE Oct 2, 1962	SHEET 2 OF 20	



ALTERNATE "A"
PLAN-SPANS 43, 44, 47 & 48
Scale: 1"=10'-0"



ALTERNATE "B"
PLAN-SPANS 43, 44, 47 & 48
Scale: 1"=10'-0"

NOTE
THE SCALE OF THIS PRINT IS
1/4" = 1'-0" OF THE ORIGINAL DRAWING.
FOR EXAMPLE,
INDICATED SCALE 2'-0" = 1"
SHOULD BE READ 1/4" = 1'-0"
INDICATED SCALE 1'-0" = 1"
SHOULD BE READ 1/4" = 1'-0"

DATE		REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
			YOUNGS BAY BRIDGE	
APPROVED William J. Mendenhall BRIDGE ENGINEER			PLAN-SPANS 43, 44, 47 & 48 DATE October 4, 1962 SHEET 73 OF 90	
DRAWN C.D.P. CHECKED T.C.V. SCALE 1"=10'-0"			BRIDGE NO. 6306 DRAWING NO. 18313	

30'-0" Roadway

NOTE
Use double post
at Bent as
shown

HALF PLAN-EXPANSION BENT

Symm. abt. & except as noted or shown
20x28" Blockouts,
construct pedestals as shown

HALF PLAN-FIXED BENT

Grout Pedestals,
see detail

HALF BRG. PLAN-EXP. BENT

Shear keys 18"x6" width of
slab @ 1/2 cts. in Bms. C,D,E.
2"x8"x28'-0" bars
2"x8"x34'-0" bars
4"x12"x12" cts.
for Bms. Bms.

HALF BRG. PLAN-FIXED BENT

16"x10"x20 bars, 90" h. top end (2 Pile Bent)
16"x10"x26 bars, 90" h. top end (2 Pile Bent)
1"x8"x5'-0" bar thru long bms.
6"x8 bars x 7'-4" bfm long bms
2"x8 bars x 3'-5"
4"x12"x12" cts.
for long bms

SEC. A-A

1"x10" rod threaded full length
to fit Richmond Structural Concrete
Insert "EC-4W" or approved equal.
2"x8"x30 bars, 90" h. end
one end; 6x end of Bm.
4"x12" dowels

SEC. B-B

16"x11" x 1/2"
Elastomeric
Bearing Pad
1/2" hole
1/2" round
5/8"

BEARING PAD
EXPANSION BENT
Scale 1/2"=1'-0"

SEC. D-D

Pour section between ends of
bms with FC-5000 p.s.i. conc.
Pour to within 1" of top of Bm
and let conc. take initial set
Reinforce concrete & pour
remainder. See Dwg. "B304"
for pouring schedule

SEC. C-C

2"x6" cont. bars
with 90" h. end.
2"x6"x10 bar
8"x5'-0" bar
2"x6"x10 bar
2"x6"x34 bars
90" h. one end.
6"x12" x 1/2" elastomeric
bearing pad
4"x12" smooth expansion JI
filler under dowels
11"x20" smooth dowel (1/2" into pedestal)
16"x11" x 1/2" bfm pad, see detail
20x28 x varies
conc. pedestal

NOTE: (Fixed end of Beams
Fill 3" Cored hole with
non-shrink grout after
beam is in place

20x28 x varies
concrete pedestal

6"x4" x 40 bars
60 cmp

F.F.

HALF ELEVATION-EXPANSION BENT

HALF ELEVATION-FIXED BENT

TYPICAL 3 PILE BENT (Alternate A)
Shown at normal roadway section

* See 2 Pile Bent Details for supered roadway section
NOTE: 3 Pile Bents required at Bents 17 thru 24 - 27 thru 34
Scale 1/2"=1'-0"

Paired joint sealer

Premixed exp.
Jt. filler

See Dwg. #4660
for water-stop off
Expanded

EXPANSION JOINT DETAIL

4"x1" holes
thru bfm pad

16"x24" x 8
crg pad

BRG. PAD & C. T. PEDESTAL
EXP. BENT

6"x12" x 1/2" elastomeric
bearing pad
4"x12" smooth expansion JI
filler under dowels
11"x20" smooth dowel (1/2" into pedestal)
16"x11" x 1/2" bfm pad, see detail
20x28 x varies
conc. pedestal

6"x4" x 40 bars
60 cmp

10"x30"x10" bars,
Std 30" h. ends

NOTE
THE SCALE OF THIS PRINT IS
1/2" OF THE ORIGINAL BEND
FOR EXAMPLE
INDICATES THAT THE
SHOULD BE READ 1/2"
INDICATES SCALE 1/2"
SHOULD BE READ 1/2"

30'-0" Roadway

Use double post
at Bent as
shown

HALF PLAN-EXPANSION BENT

Symm. abt. & except as noted or shown
20x28" Blockouts,
construct pedestals as shown

HALF PLAN-FIXED BENT

3-20x28" x 18" Blockouts under center & left
hand beams (Fixed Bents - Supered Rwy. Section)
Construct pedestals as shown in detail.

HALF BRG. PLAN-EXP. BENT

1-4" dia. x 1-8" hole, utility
holes each side of Pile
(Typical all cross beams)

HALF BRG. PLAN-FIXED BENT

Grout pedestal under
right hand beam (Fixed
Bents - Supered Rwy.
Section), see detail.

NOTE

Beams "A" & "B" similar
to those for normal Pile
See Grout Pedestal Detail
4" round bars,
60 end of Bm

HALF ELEVATION-EXPANSION BENT

HALF ELEVATION-FIXED BENT

TYPICAL 2 PILE BENT (Alternate A)

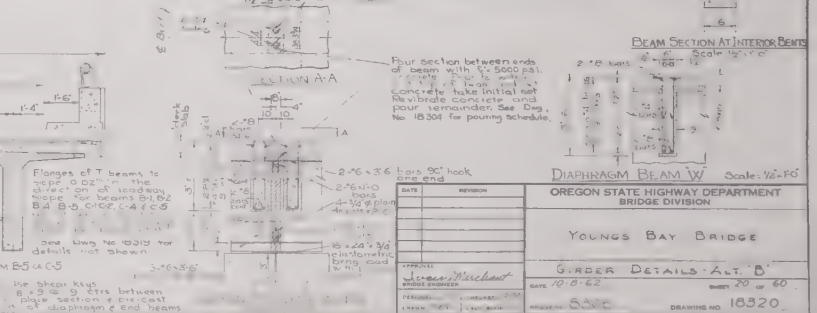
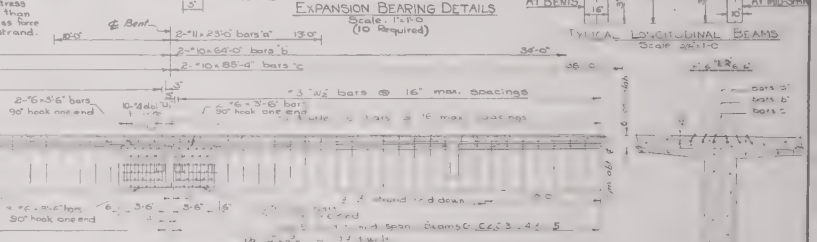
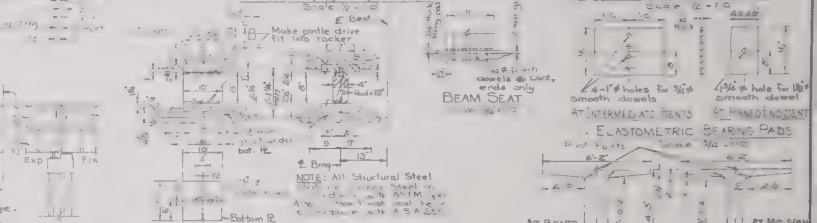
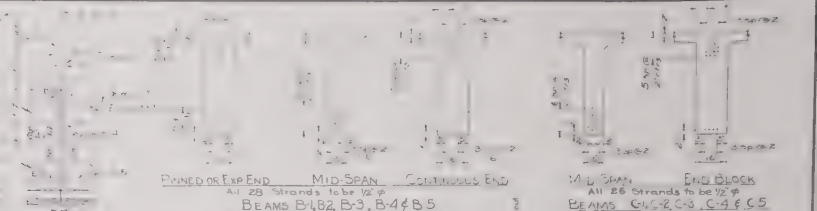
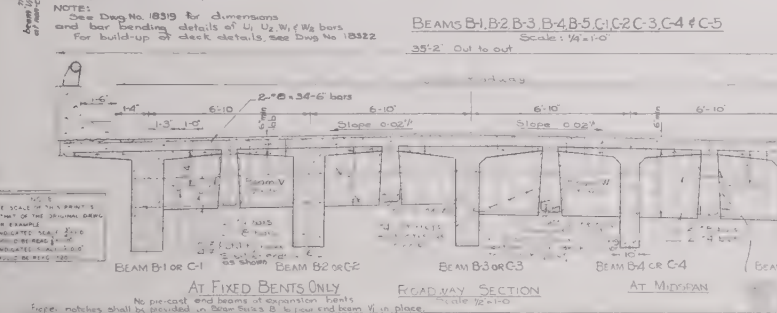
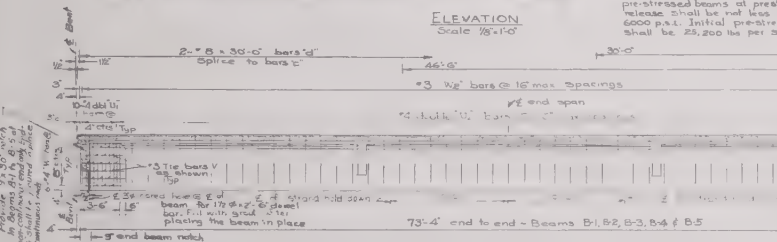
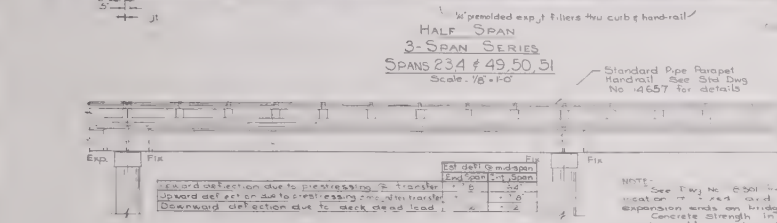
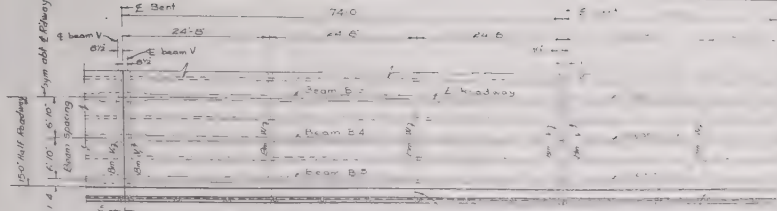
(Shown at supered roadway section)

* See 3 Pile Bent Details for normal roadway section
NOTE: 2 Pile Bents required at Bents 2 thru 16 - 35 thru 49
Scale 1/2"=1'-0"

NOTE

PILE CAPS MAY BE PRECAST, WITH DETAILS
TO BE FURNISHED BY CONTRACTOR.
FORECAST CAPS SHALL BE EQUAL IN ALL RESPECTS TO
THE PRECAST IN PLACE CAPS DETAIL, AND ALL DETAILS
OF FABRICATION AND PLACING SHALL BE FURNISHED BY THE
ENGINEER.

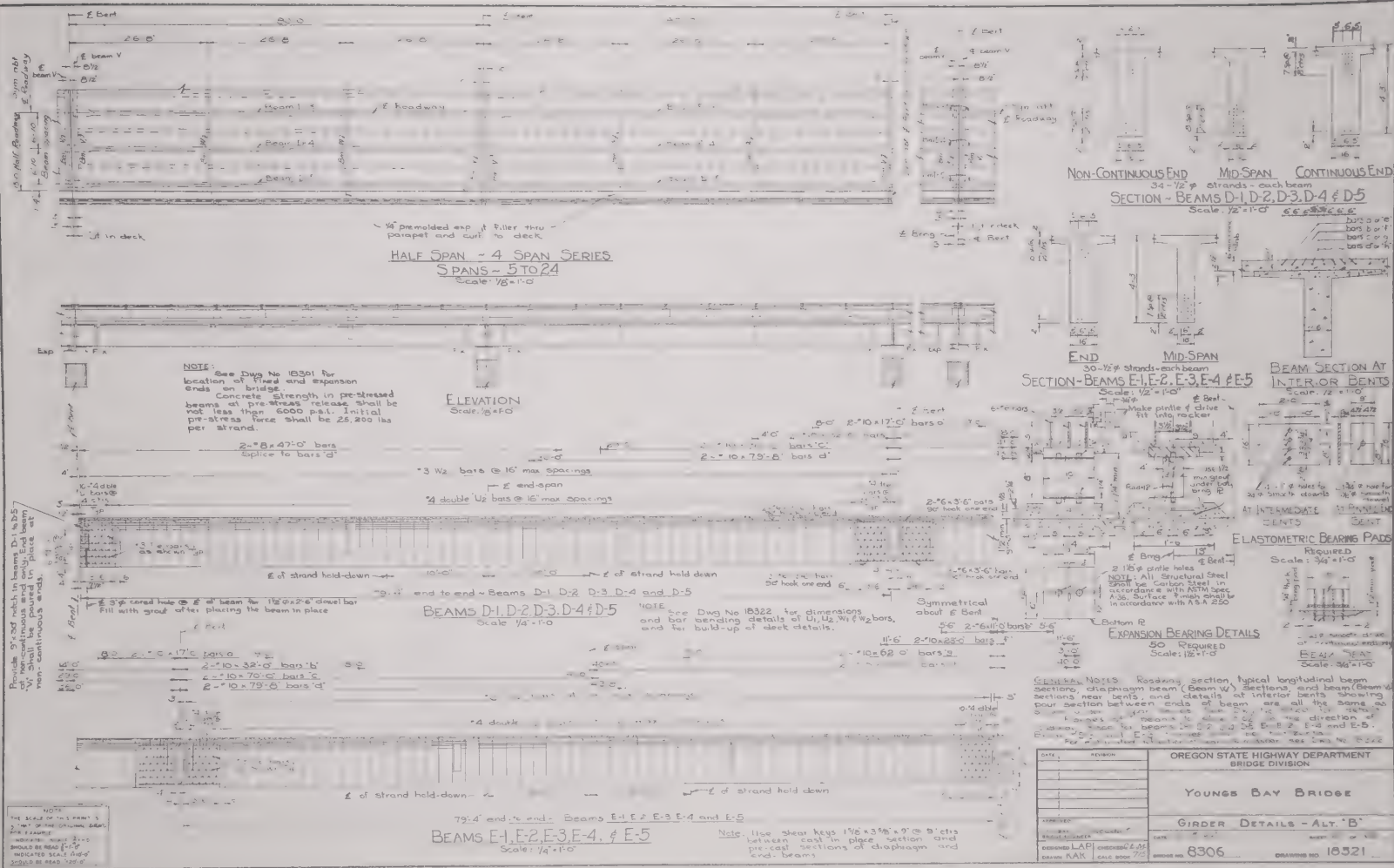
DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
APPROVED:		DATE:	
DESIGNED BY:		CHECKED BY:	
ENGINEER:		BRIDGE NO.:	
DRAWING NO.:			



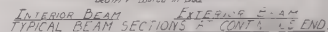
REV. 10/84

THE STATE OF OREGON
DEPARTMENT OF TRANSPORTATION
BRIDGE DIVISION
YOUNGS BAY BRIDGE
BRIDGE NO. 18322
DATE 10/84
BY [Signature]
CHECKED BY [Signature]
APPROVED BY [Signature]

DIAPHRAGM BEAM W Scale: 1/2"=1'-0"
OREGON STATE HIGHWAY DEPARTMENT
BRIDGE DIVISION
YOUNGS BAY BRIDGE
GIRDER DETAILS - AT BENT
DATE 10/84
BY [Signature]
CHECKED BY [Signature]
APPROVED BY [Signature]
BRIDGE NO. 18322
DRAWING NO. 18322

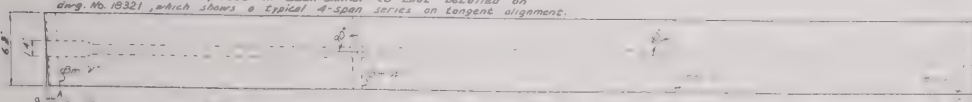


Note: Concrete strength in prestressed beams of prestress release shall be not less than 6000 psi. Initial prestress force shall be 25,200 lb per strand.



Notes

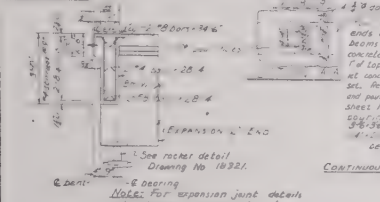
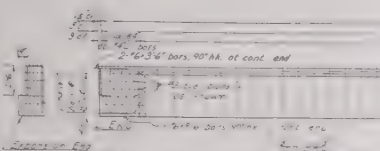
These beams are part of a 4-span series for live load.
See Plan Drawing Nos. 1830 & 1831 for location. Negative moment steel
over bents is to be placed in deck similar to LARS detailed on
dwg. No. 18321, which shows a typical 4-span series in tangent alignment.



PLAN

Note: Concrete strength in prestressed
beams at prestress release shall be not
less than 5000 psi. Initial prestress force
shall be 25,000 lb per strand.

Spacing of #3 W2 bars at 16" c/c maximum
1st 10' of deck & #4 W2 bars at 6" c/c maximum



EXPANSION JNT

See Dwg. No. 18301 for location
of fixed & expansion ends.

CONTINUOUS BEAM END

CONTINUOUS END

Beams cast straight & cambered
from prestressing difference
between grade of deck & camber in beam
to be compensated for by build-up over beams

5 Bars @ 90% at cont ends & R End
continuous, waterstop see dwg. 18301
1" deep poured with sealer
1" premixed exp. joint filler

Typical deck expansion joint

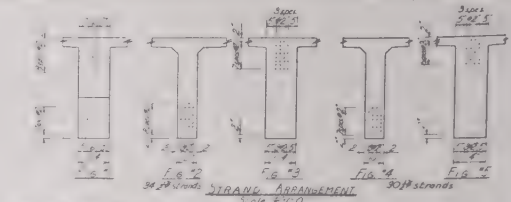
1" expanded polystyrene

Deck 17" 5" high with
grout after beam is placed
3" core top for 3" diameter and
17" 1/2" diameter in place

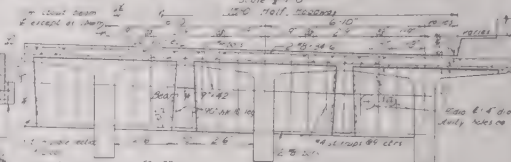
3" hole for 17" smooth
dowel in 17" 1/2"

Build up at Deck

B MOSPAN



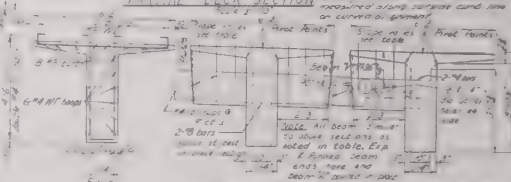
STRAND ARRANGEMENT



Note: Use shear keys 17" 5/8" x
49" c/c between cast in place
section & precast section of
caphragm & beams. Four
locking section with deck or
prior to deck pour

Deck 17" 5" high
5 Bars @ 12" c/c top & bottom
5 Bars @ 12" c/c centers
20" 4" long spacers in top of deck
22" 4" long spacers in bottom of deck
Top transverse bars 6" clear of beam ends
Spacing of transverse bars shall be
consistent along entire length and
on curved alignment

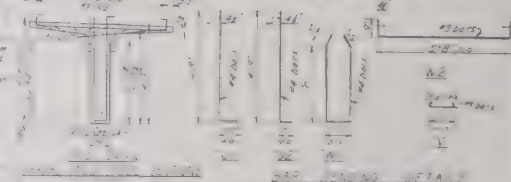
LATERAL DECK SECTION



END

INTERIOR BEAM

INTERIOR BEAM



DETAIL

BEAM	LOCATION	Span	Span No.	Span Length	Span Area	Span Volume	Span Weight	Span Moment	Span Deflection	Span Camber	Span Settlement	Span Elevation	Span Notes
1	Span 18.32	77.7	34	2	18	30	0	3.38	18	18	18	18	18
2	Span 18.37	77.7	34	2	18	30	0	3.38	18	18	18	18	18
3	Span 18.38	77.7	34	2	18	30	0	3.38	18	18	18	18	18
4	Span 18.39	77.7	34	2	18	30	0	3.38	18	18	18	18	18
5	Span 18.40	77.7	34	2	18	30	0	3.38	18	18	18	18	18
6	Span 18.41	77.7	34	2	18	30	0	3.38	18	18	18	18	18
7	Span 18.42	77.7	34	2	18	30	0	3.38	18	18	18	18	18
8	Span 18.43	77.7	34	2	18	30	0	3.38	18	18	18	18	18
9	Span 18.44	77.7	34	2	18	30	0	3.38	18	18	18	18	18
10	Span 18.45	77.7	34	2	18	30	0	3.38	18	18	18	18	18
11	Span 18.46	77.7	34	2	18	30	0	3.38	18	18	18	18	18
12	Span 18.47	77.7	34	2	18	30	0	3.38	18	18	18	18	18
13	Span 18.48	77.7	34	2	18	30	0	3.38	18	18	18	18	18
14	Span 18.49	77.7	34	2	18	30	0	3.38	18	18	18	18	18
15	Span 18.50	77.7	34	2	18	30	0	3.38	18	18	18	18	18
16	Span 18.51	77.7	34	2	18	30	0	3.38	18	18	18	18	18
17	Span 18.52	77.7	34	2	18	30	0	3.38	18	18	18	18	18
18	Span 18.53	77.7	34	2	18	30	0	3.38	18	18	18	18	18
19	Span 18.54	77.7	34	2	18	30	0	3.38	18	18	18	18	18
20	Span 18.55	77.7	34	2	18	30	0	3.38	18	18	18	18	18
21	Span 18.56	77.7	34	2	18	30	0	3.38	18	18	18	18	18
22	Span 18.57	77.7	34	2	18	30	0	3.38	18	18	18	18	18
23	Span 18.58	77.7	34	2	18	30	0	3.38	18	18	18	18	18
24	Span 18.59	77.7	34	2	18	30	0	3.38	18	18	18	18	18
25	Span 18.60	77.7	34	2	18	30	0	3.38	18	18	18	18	18
26	Span 18.61	77.7	34	2	18	30	0	3.38	18	18	18	18	18
27	Span 18.62	77.7	34	2	18	30	0	3.38	18	18	18	18	18
28	Span 18.63	77.7	34	2	18	30	0	3.38	18	18	18	18	18
29	Span 18.64	77.7	34	2	18	30	0	3.38	18	18	18	18	18
30	Span 18.65	77.7	34	2	18	30	0	3.38	18	18	18	18	18
31	Span 18.66	77.7	34	2	18	30	0	3.38	18	18	18	18	18
32	Span 18.67	77.7	34	2	18	30	0	3.38	18	18	18	18	18
33	Span 18.68	77.7	34	2	18	30	0	3.38	18	18	18	18	18
34	Span 18.69	77.7	34	2	18	30	0	3.38	18	18	18	18	18
35	Span 18.70	77.7	34	2	18	30	0	3.38	18	18	18	18	18
36	Span 18.71	77.7	34	2	18	30	0	3.38	18	18	18	18	18
37	Span 18.72	77.7	34	2	18	30	0	3.38	18	18	18	18	18
38	Span 18.73	77.7	34	2	18	30	0	3.38	18	18	18	18	18
39	Span 18.74	77.7	34	2	18	30	0	3.38	18	18	18	18	18
40	Span 18.75	77.7	34	2	18	30	0	3.38	18	18	18	18	18
41	Span 18.76	77.7	34	2	18	30	0	3.38	18	18	18	18	18
42	Span 18.77	77.7	34	2	18	30	0	3.38	18	18	18	18	18
43	Span 18.78	77.7	34	2	18	30	0	3.38	18	18	18	18	18
44	Span 18.79	77.7	34	2	18	30	0	3.38	18	18	18	18	18
45	Span 18.80	77.7	34	2	18	30	0	3.38	18	18	18	18	18
46	Span 18.81	77.7	34	2	18	30	0	3.38	18	18	18	18	18
47	Span 18.82	77.7	34	2	18	30	0	3.38	18	18	18	18	18
48	Span 18.83	77.7	34	2	18	30	0	3.38	18	18	18	18	18
49	Span 18.84	77.7	34	2	18	30	0	3.38	18	18	18	18	18
50	Span 18.85	77.7	34	2	18	30	0	3.38	18	18	18	18	18
51	Span 18.86	77.7	34	2	18	30	0	3.38	18	18	18	18	18
52	Span 18.87	77.7	34	2	18	30	0	3.38	18	18	18	18	18
53	Span 18.88	77.7	34	2	18	30	0	3.38	18	18	18	18	18
54	Span 18.89	77.7	34	2	18	30	0	3.38	18	18	18	18	18
55	Span 18.90	77.7	34	2	18	30	0	3.38	18	18	18	18	18
56	Span 18.91	77.7	34	2	18	30	0	3.38	18	18	18	18	18
57	Span 18.92	77.7	34	2	18	30	0	3.38	18	18	18	18	18
58	Span 18.93	77.7	34	2	18	30	0	3.38	18	18	18	18	18
59	Span 18.94	77.7	34	2	18	30	0	3.38	18	18	18	18	18
60	Span 18.95	77.7	34	2	18	30	0	3.38	18	18	18	18	18
61	Span 18.96	77.7	34	2	18	30	0	3.38	18	18	18	18	18
62	Span 18.97	77.7	34	2	18	30	0	3.38	18	18	18	18	18
63	Span 18.98	77.7	34	2	18	30	0	3.38	18	18	18	18	18
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68	Span 19.03	77.7	34	2	18	30	0	3.38	18	18	18	18	18
69	Span 19.04	77.7	34	2	18	30	0	3.38	18	18	18	18	18
70	Span 19.05	77.7	34	2	18	30	0	3.38	18	18	18	18	18
71	Span 19.06	77.7	34	2	18	30	0	3.38	18	18	18	18	18
72	Span 19.07	77.7	34	2	18	30	0	3.38	18	18	18	18	18
73	Span 19.08	77.7	34	2	18	30	0	3.38	18	18	18	18	18
74	Span 19.09	77.7	34	2	18	30	0	3.38	18	18	18	18	18
75	Span 19.10	77.7	34	2	18	30	0	3.38	18	18	18	18	18
76	Span 19.11	77.7	34	2	18	30	0	3.38	18	18	18	18	18
77	Span 19.12	77.7	34	2	18	30	0	3.38	18	18	18	18	18
78	Span 19.13	77.7	34	2	18	30	0	3.38	18	18	18	18	18
79	Span 19.14	77.7	34	2	18	30	0	3.38	18	18	18	18	18
80	Span 19.15	77.7	34	2	18	30	0	3.38	18	18	18	18	18
81	Span 19.16	77.7	34	2	18	30	0	3.38	18	18	18	18	18
82	Span 19.17	77.7	34	2	18	30	0	3.38	18	18	18	18	18
83	Span 19.18	77.7	34	2	18	30	0	3.38	18	18	18	18	18
84	Span 19.19	77.7	34	2	18	30	0	3.38	18	18	18	18	18
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86	Span 19.21	77.7	34	2	18	30	0	3.38	18	18	18	18	18
87	Span 19.22	77.7	34	2	18	30	0	3.38	18	18	18	18	18
88	Span 19.23	77.7	34	2	18	30	0	3.38	18	18	18	18	18
89	Span 19.24	77.7	34	2	18	30	0	3.38	18	18	18	18	18
90	Span 19.25	77.7	34	2	18	30	0	3.38	18	18	18	18	18
91	Span 19.26	77.7	34	2	18	30	0	3.38	18	18	18	18	18
92	Span 19.27	77.7	34	2	18	30	0	3.38	18	18	18	18	18
93	Span 19.28	77.7	34	2	18	30	0	3.38	18	18	18	18	18
94	Span 19.29	77.7	34	2	18	30	0	3.38	18	18	18	18	18
95	Span 19.30	77.7	34	2	18	30	0	3.38	18	18	18	18	18
96	Span 19.31	77.7	34	2	18	30	0	3.38	18	18	18	18	18
97	Span 19.32	77.7	34	2	18	30	0	3.38	18	18	18	18	18
98	Span 19.33	77.7	34	2	18	30	0	3.38	18	18	18	18	18
99	Span 19.34	77.7	34	2	18	30	0	3.38	18	18	18	18	18
100	Span 19.35	77.7	34	2	18	30	0	3.38	18	18	18	18	18

These beams are part of a 4-span series for live load.
See Plans Drawing No. 18315 for Abutment. Negative moment steel
over piers is to be placed in deck similar to that detailed on
Wing No. 18321, which shows a typical 4-span series on tangent alignment.

$a = \frac{A}{B \cdot E}$

Note: Concrete strength is overstressed

Note: Concrete strength in prestressed beams at prestress release shall be not less than 6000 psi. Initial prestress force shall be 25,200 lb per strand.

Spacing of #3 W2 bars at 16" ctrs maximum
Spacing of double #4 W2 bars at 16" ctrs maximum

[illegible]

3 8" x 3 1/2" Dwg, 90° HA at cont ends — R" END
continuous waterstop sea dry. W/SSO Pinned End
1/2" deep poured joint sealer
1" preformed exp. joint filler —

Typical deck expansion ft. $\frac{1}{8}$ in. 346

1^a expedid. instrucción

Note Fill 3" ϕ hole with Bm V. 2

grout after beam is placed.
5' cured hole for 4' comp. beam

2 1/2 1076 11 12 2000

144043 PINNED R END-2

 $\frac{1}{2}$ " min. grad $\frac{1}{2}$

1/2" 26 dawl set 1/0 into cap
bearing

3rd hole for 1st person

2004

10. The following table shows the number of people who attended the concert in each age group.

1891

er in beam $\frac{1}{2}$
at beam.

FOR DETAILS

MA 2 STEPS

Year	Number of people (millions)
1960	15
1970	18
1980	22
1990	26
2000	30
2010	33
2020	35

[illegible]

4' spacing	bars	fabrication and erection
------------	------	--------------------------

the required deck elevation is 1.5 m.

Q	204	=
---	-----	---

9 1917 SECTION

9 70 2

771/2	.
-------	---

9		
0		

4 1

Note. See Dwg No. 100 for graph of plot.

9	u	z
9	u	z

9	.	.	4 open series, 2 "o spine to 2 "d" bars
---	---	---	--

in Dwg. No. 18321

9 BEAM SECTION
INTERIOR OF

9 10/13/31 INTERIOR
Scale 1" = 10'

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Fig. 1

Fig. 2

Fig. 3

Fig. 4

30# strands

STRAND ARRANGEMENT

Hand-drawn floor plan of a building. The plan shows a rectangular structure with several internal divisions. Dimensions are noted in feet and inches. Labels include "120' 0\"/>

[illegible]

SECTION 4-B

DORSAL DORSAL

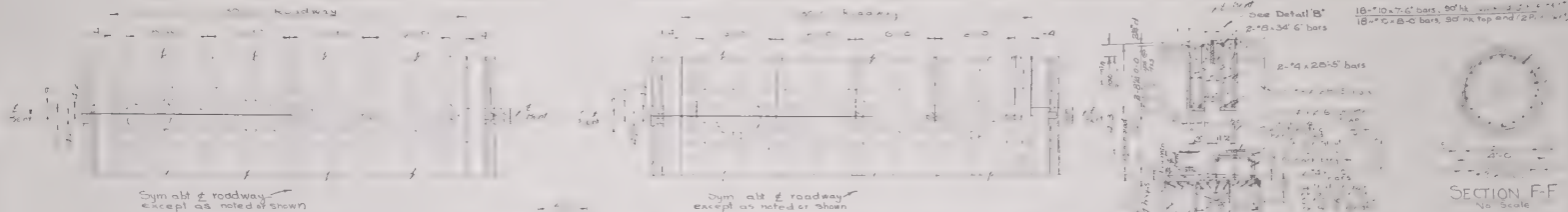
DORSAL DORSAL

Note. See Dwg No. 18321
for length & placement
of above bars in deck of
4 span series. 2 "o bars = 47
spine to 2 "o bars as shown
in Dwg. No. 18321

BEAM SECTION AT
INTERIOR BENTS

Scale 1/4" = 1'-0"

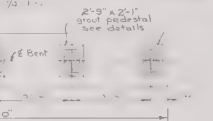
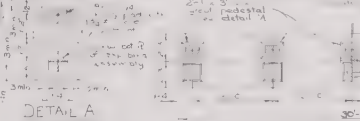
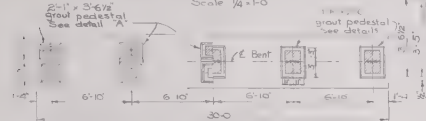
[illegible]



HALF PLAN-EXPANSION BENT
Scale 1/4"=1'-0"

HALF PLAN-FIXED BENT
Scale 1/4"=1'-0"

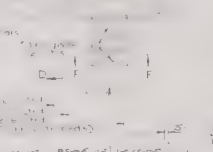
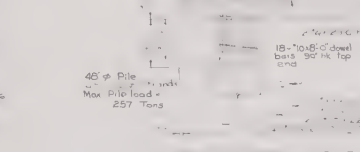
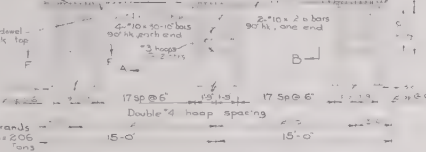
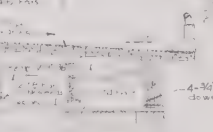
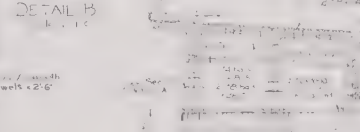
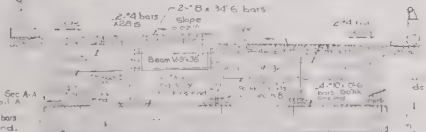
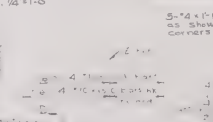
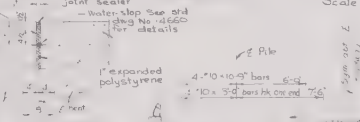
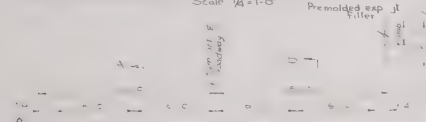
HALF PLAN-FIXED BENT
Scale 1/4"=1'-0"



HALF BRNG. PLAN-EXP BENT
Scale 1/4"=1'-0"

HALF BRNG. PLAN-FIXED BENT
Scale 1/4"=1'-0"

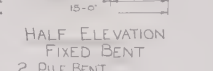
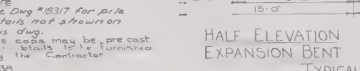
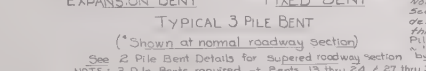
HALF BRNG. PLAN-FIXED BENT
Scale 1/4"=1'-0"



HALF ELEVATION EXPANSION BENT
Scale 1/4"=1'-0"

HALF ELEVATION FIXED BENT
Scale 1/4"=1'-0"

HALF ELEVATION EXPANSION BENT
Scale 1/4"=1'-0"



TYPICAL 3 PILE BENT
(Shown at normal roadway section)

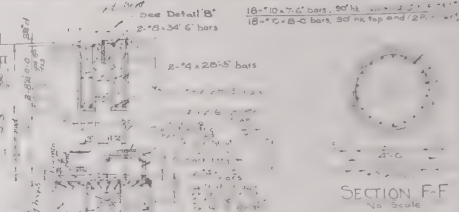
TYPICAL 2 PILE BENT
(Shown at supered roadway section)

TYPICAL 2 PILE BENT
(Shown at supered roadway section)

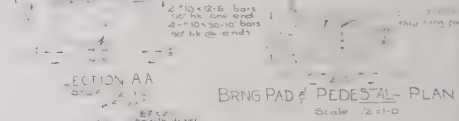
NOTE: 2 Pile Bent Details for supered roadway section
NOTE: 3 Pile Bents required at Bents 13 thru 24 & 27 thru 30
Scale 1/4"=1'-0"

NOTE: 2 Pile Bents required at Bents 2 thru 12 & 39 thru 49
Scale 1/4"=1'-0"

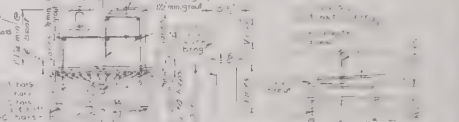
NOTE: 2 Pile Bents required at Bents 2 thru 12 & 39 thru 49
Scale 1/4"=1'-0"



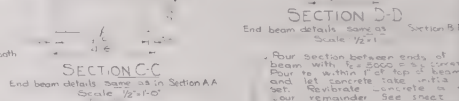
SECTION F-F
No Scale



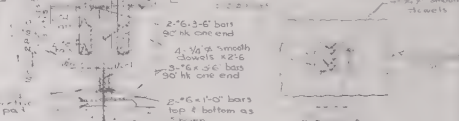
BRNG PAD & PEDESTAL PLAN
Scale 1/2"=1'-0"



SECTION A-A
Scale 1/2"=1'-0"



SECTION C-C
End beam details same as in Section AA
Scale 1/2"=1'-0"



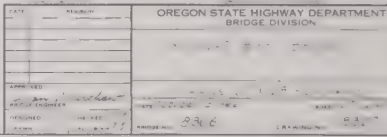
SECTION B-B
Scale 1/2"=1'-0"

DATE		REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
			YOUNGS BAY BRIDGE	
			BENT DETAILS - A-B-E	
			BENT 13	
			BENT 24	
			BENT 27	
			BENT 30	
			BENT 39	
			BENT 49	

NOTE:
THE SCALE OF THIS PRINT IS
1"=10'-0" FOR ALL DIMENSIONS
UNLESS OTHERWISE NOTED
INDICATED SCALE 1/4"=1'-0"
SHOULD BE USED FOR ALL
DIMENSIONS UNLESS NOTED

Note:
See Div. 8317 for pile
details not shown on
this drawing.
Pile caps may be precast
or cast in place.
by the Contractor.

Note:
Pile caps shall be equal in all
respects to the poured in place
caps detailed, and all details of
fabrication and placing shall be
approved by the Engineer.



PLAN - BENT 25
Scale 1/4"=1'-0"

BEAMS BEARING PLAN
Scale 1/4"=1'-0"

ELEVATION - BENT 25
Scale 1/4"=1'-0"

SECTION E-E
No Scale

PLAN - BENT 26
Scale 1/4"=1'-0"

BEAMS BEARING PLAN
Scale 1/4"=1'-0"

ELEVATION - BENT 26
Scale 1/4"=1'-0"

DETAIL A
Scale 1/2"=1'-0"

DETAIL B
Scale 1/2"=1'-0"

DETAIL C
Scale 1/2"=1'-0"

SECTION D-D
Scale 1/2"=1'-0"
(Using All. B beams)

SECTION C-C
Scale 1/4"=1'-0"
(Using All. A beams)

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
		BENT 25 & 26	
APPROVED		DATE	PROJECT
DESIGNED BY	BRIDGE ENGINEER		
CHECKED BY		BRIDGE NO.	DRAWING NO.

NOTE:
THE SCALE OF THIS DRAWING IS
3 TIMES OF THE ORIGINAL DRAWING.
FOR EXAMPLE:
INDICATED SCALE 1/4"=1'-0"
SHOULD BE READ 3/4"=1'-0"
INDICATED SCALE 1/2"=1'-0"
SHOULD BE READ 3/2"=1'-0"

1. See Section C-C for details of Bent 25
2. See Section D-D for details of Bent 26

3. See Section E-E for details of Bent 25



DETAIL D
Scale 1/2"=1'-0"
NOTE: Precast caps shall be
cast in place caps.
Pile caps may be precast
with details to be furnished
by Contractor.

Beam Size of Bent 25
Similar to Bent 25

Pile size of Bent 25
Similar to Bent 25

DETAIL A
Scale 1/2"=1'-0"
1. expanded polyethylene
rein details in
chaplains beam
same as shown in
Section C-C
Details of dowel
of bent pad same
as in Section C-C
2. 2" x 2" x 4" bars
3. 1/2" hole

DETAIL B
Scale 1/2"=1'-0"
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

DETAIL C
Scale 1/2"=1'-0"
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

SECTION D-D
Scale 1/2"=1'-0"
(Using All. B beams)
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

SECTION C-C
Scale 1/4"=1'-0"
(Using All. A beams)
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

SECTION E-E
No Scale
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

SECTION F-F
No Scale
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

SECTION G-G
No Scale
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

SECTION H-H
No Scale
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

SECTION I-I
No Scale
1. 1/2" hole
2. 2" x 2" x 4" bars
3. 1/2" hole

132'-6" Ctr. Ctr. Piers

16-Wire Rope Assys @ 62' 3 1/2"
16-Wire Rope Assys @ 60'-0"

COUNTERWEIGHT ROPES

(32 Required)
Scale 1/2"=1'-0"

COUNTERWEIGHT ROPE SPECIFICATION

1 1/2" dia. Preformed, prestressed, Extra Improved
Plain Steel, 6x46 construction, Right Regular
Lay with Independent Wire Rope Core, Bright
(uncoated) wire, Maximum Breaking Strength of
103,400 Lbs., "Royal Blue" as manufactured by
John A. Roebling Sons, or equal.
Rope shall conform to Standard Specifications
for Highway Bridges, AASHTO, 1953, except
as noted above.

NOTE
THE SCALE OF THIS DRAWING
IS THAT OF THE ORIGINAL
AND EXAMINE
INDICATED SCALE
SHOULD BE 1/2"=1'-0"
INDICATED SCALE 1/2"=1'-0"
SHOULD BE 1/2"=1'-0"

Profile Grade
(Span raised)

LIFT SPAN OPERATING DIAGRAM

Sta 41+90.60

Detail A Pier 2

JD(A), top of tower

23" conduit
Notes: see Div. 10503 for Legend

FIXED SPAN

Aerial Signage cable (by others on lift span only)

Terminal doors

LIFT SPAN

2400 Volt aerial power cable, avg 3 0" spacing 1" ft

Roadway Sign Lighting circuit aerial cable May be combined in
Signal circuit aerial cable
Gate Control circuit aerial cable perpendicular cables

Detail B Sta 42+64.62

CONDUIT LAYOUT - TRUSS SPANS

Notes

Turnbuckle bolts to be used for connecting each messenger span cable to towers.
Pull down on tower to be located near to limit the maximum number of bends
between pull down to two 90° bends.
Pull down of top of tower to be provided with vertical cable supporting
fillings.

Expansion joints in conduit system standard J-1 type, as required
Location, sizes & location as indicated.

Location and use of all pull down devices for purpose of conduit attachment to
structure shall have the proper design of the engineer.

Conduit and aerial cables for span wire circuits, navigation lights, aerial beacons, etc. not shown.
See Notes for additional information.

DETAIL A

Support conduit @

15" Signal

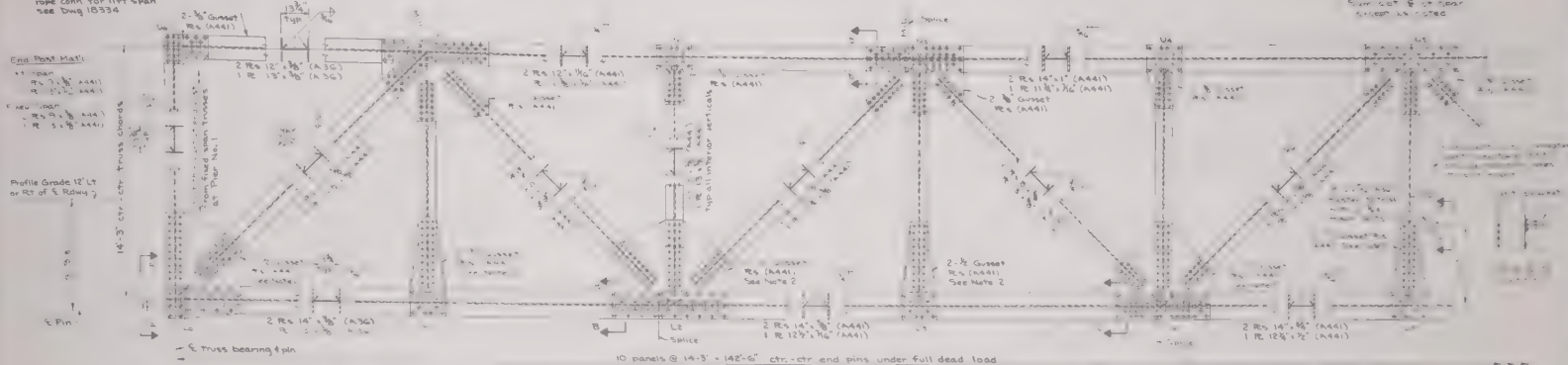
23" Gate Control

DETAIL B

OREGON STATE HIGHWAY DEPARTMENT
BRIDGE DIVISION

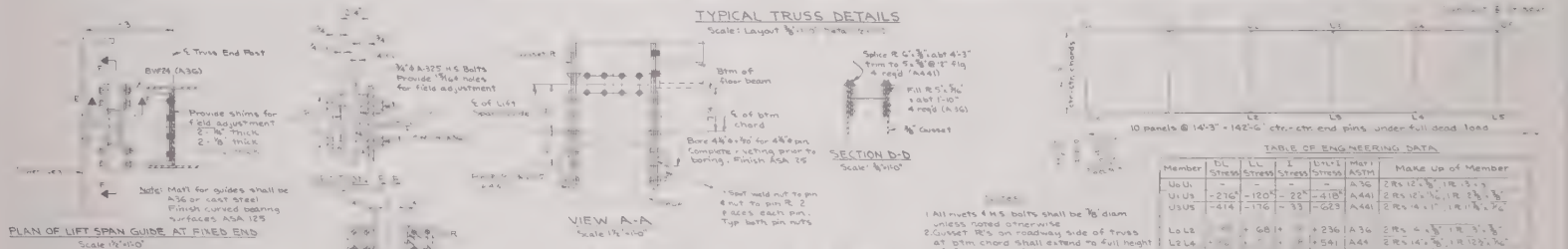
YOUNGS BAY BRIDGE

{ Note: Omit member U_2-U_1 from fixed span trusses at Pier No. 1

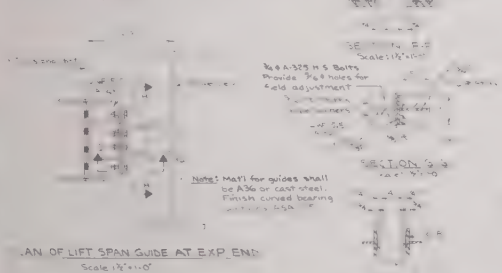


Scale: Layout 3/8" = 1' - 0" Detail 1/4" = 1' - 0"

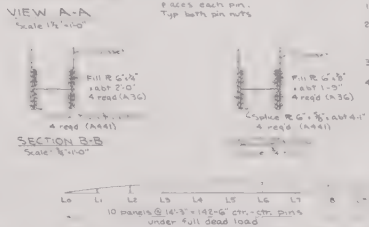
Scale: Layout 3/8" = 1' - 0" Detail 1/4" = 1' - 0"



PLAN OF LIFT SPAN GUIDE AT FIXED END
Scale $1\frac{1}{2}" = 1'-0"$



PLAN OF LIFT SPAN GUIDE AT EXP. END
Scale 1/2" = 1'-0"



SECTION B-B
Scale: 1/8"=1'-0"

1. All rivets & H.S. bolts shall be $\frac{1}{2}$ diam unless noted otherwise.
2. Gusset R's on roadway side of truss at btm chord shall extend to full height of floor beam. Outside gussets shall be stopped lower as shown.
3. All vertical truss members shall be plumb when trusses are under full d.l.
4. Provide $\frac{1}{2}$ " dia drain holes at abt 3'-0" cts in webs of top & btm chord members.

Member	DL STRESS	LL STRESS	STRESS STRESS	LL+LL A441	MAST A441	MAKE UP OF MEMBER
U ₀₁	-	-	-	-	-	2R 10 1/2" 1R 3 1/2"
U ₀₂	-210	-120	-22	-410	A441	2R 10 1/2" 1R 3 1/2"
U ₀₃	-414	-176	-33	-623	A441	2R 10 1/2" 1R 3 1/2"
L ₀₁	-	68	-	+236	A36	2R 10 1/2" 1R 3 1/2"
L ₀₂	-	151	-	+514	A441	2R 10 1/2" 1R 3 1/2"
L ₀₃	-	160	-	+645	A441	2R 10 1/2" 1R 3 1/2"
U ₀₁	-990	-109	-19	-1245	A441	2R 10 1/2" 1R 3 1/2"
U ₀₂	-111	10	-15	-105	A441	2R 10 1/2" 1R 3 1/2"
U ₀₃	-122	-73	-16	-211	A441	2R 10 1/2" 1R 3 1/2"
U ₀₄	-73	62	-15	+150	A36	2R 10 1/2" 1R 3 1/2"
L ₀₅	-24	-50	-13	-87	A441	2R 10 1/2" 1R 3 1/2"
U ₀₅	-	39	0	35	A441	2R 10 1/2" 1R 3 1/2"
L ₀₆	+201	-	-	-	A441	2R 10 1/2" 1R 3 1/2"
U ₀₆	-35	+40	+12	+15	A441	2R 10 1/2" 1R 3 1/2"
U ₀₇	-	-	-	-	A441	2R 10 1/2" 1R 3 1/2"

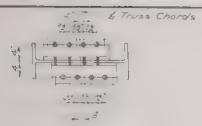
- 1 Design stress = $R_{bt} + 20\%$ (for 14" span only)
- 2 To design stress shown add bending moment of 623 normal to truss.
- 3 Design stress = 100^k or $+98^k$

DATE	NO. OF SHEETS	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION
		YOUNGS BAY BRIDGE
		TRUSS DETAILS
DESIGNED BY	CHECKED BY	DATE
APPROVED BY	DATE	DRAWING NO.

TRUSS CAMBER DIAGRAM

Note: Fixed span & lift span camber identical
 Δ_{DL} deflection due to steel framing = 25% of total Δ_{L} defl.

NOTE
THE SCALE OF THIS PRINT IS
THAT OF THE ORIGINAL DRAW
FOR EXAMPLE
INDICATED SCALE $\frac{1}{2}'' = 0'$
SHOULD BE READ $\frac{1}{2}'' = 0'$
INDICATED SCALE $\frac{1}{4}'' = 0'$
SHOULD BE READ $\frac{1}{4}'' = 0'$



Truss End Post
Truss Bearing



SWAGED SOCKET
Scale: 1/2" = 1'-0"

HALF SECTION F-F
Scale: 1/2" = 1'-0"

ELEVATION
Scale: 1/2" = 1'-0"

WIRE ROPE SPACER ASSEMBLY DETAILS
(Assemblies required)

SECTION G-G
Scale: 1/2" = 1'-0"

VIEW A-A
Scale: 1" = 1'-0"

ELEVATION - LIFT SPAN ROPE CONNECTION
Scale: 1/2" = 1'-0"

SIDE ELEVATION

END ELEVATION

DETAIL J
Full Scale

HALF SECTION H-H
Scale: 1/2" = 1'-0"

SIDE ELEVATION

END ELEVATION

FIXED SHOE 'A'
2 Required
Scale: 1/2" = 1'-0"

EXPANSION SHOE 'B'
2 Required
Scale: 1/2" = 1'-0"

HALF SECTION
Scale: 1/2" = 1'-0"

SIDE ELEVATION

END ELEVATION

ROCKER SHOE 'C'
2 Required
Scale: 1/2" = 1'-0"

PLAN
MASONRY FOR SHOE 'C'

PINTE
Scale: 3" = 1'-0"

HALF PLAN

SIDE ELEVATION

HALF END ELEVATION

HALF SECTION
Scale: 1/2" = 1'-0"

MASONRY PLATE FOR SHOE 'A'

NOTE:
All bearing device material shall be ASTM Spec A-36
All assemblies except masonry plates for shoes A, B & C
shall be stress relief annealed after fabrication
Surface finish of bearing surfaces as follows:
Heavy plates in contact to be welded, A SA 1000.
Rockers, A SA 250.
Pin & pin holes, A SA 125.
Plates sliding on fabricated surfaces, A SA 125.
Contact areas between shoes of masonry & non-sliding, A SA 250
Sliding surfaces shall be machined in the
direction of motion.

SIDE ELEVATION

END ELEVATION

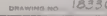
FIXED SHOE 'D'
2 Required
Scale: 1/2" = 1'-0"

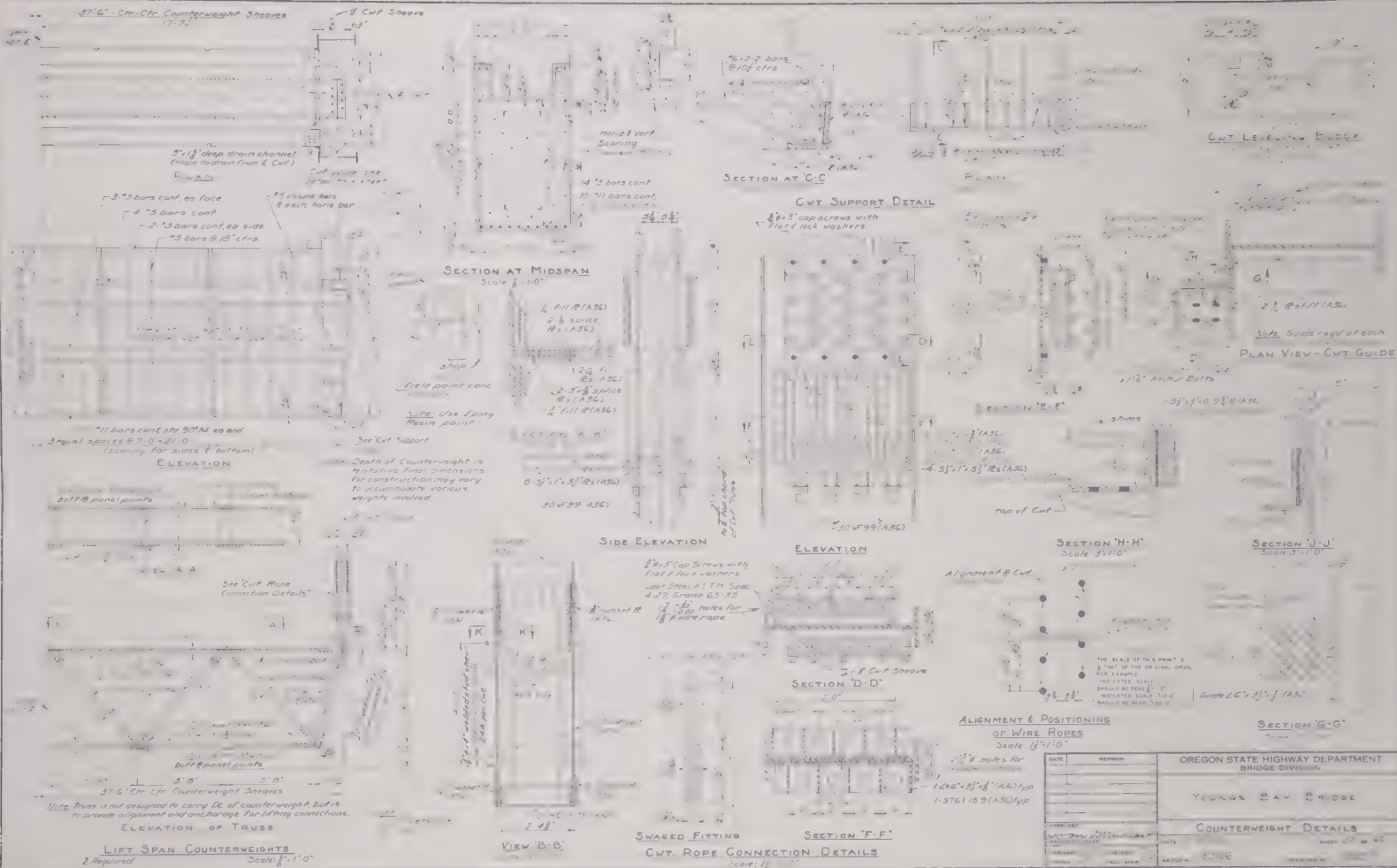
DETAIL E - BEARING R ASSEMBLY
2 Assemblies req'd each connection
Scale: 3" = 1'-0"

SECTION C-C
Scale: 1" = 1'-0"

Note: Dimensions of most of some of
shown in Section B-B

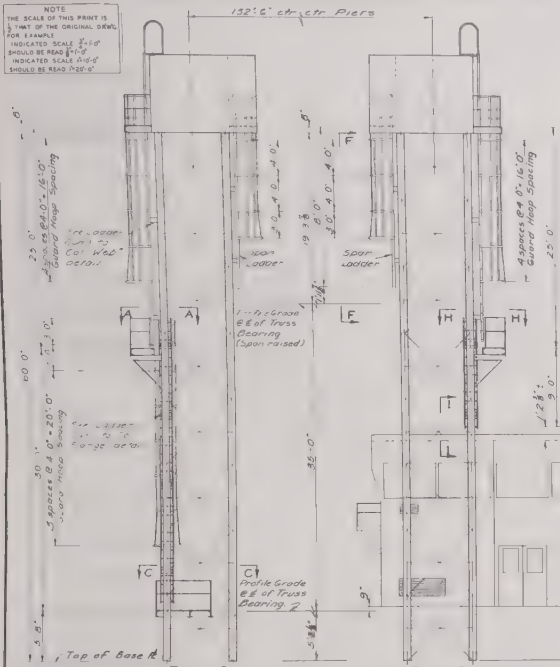
DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
DESIGNED BY	CHECKED BY	DATE	SCALE
DRAWN BY	CALC. BY	BRIDGE NO.	DRAWING NO.
		8306	8304



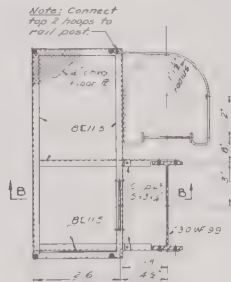


DATE		REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
			YOUNGS BAY BRIDGE	
			COUNTERWEIGHT DETAILS	
DRAWN BY: [Signature]		CHECKED BY: [Signature]	DATE: 1-1-66	
DESIGNED BY: [Signature]		APPROVED BY: [Signature]	SHEET 1 OF 1	

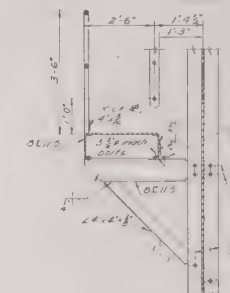
NOTE: THE SCALE OF THIS PRINT IS 1/4" = 1'-0" OF THE ORIGINAL. DIMENSIONS INDICATED SCALE 1/4" = 1'-0" SHOULD BE READ 1/4" = 1'-0" INDICATED SCALE DIMENSIONS SHOULD BE READ 1/4" = 1'-0"



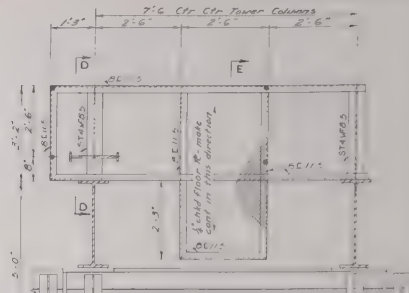
TOWER LADDER DETAILS
Scale 1/4" = 1'-0"



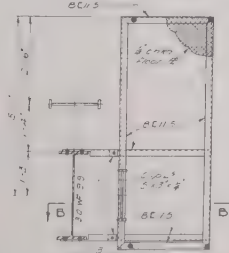
SECTION A-A
Scale 1/4" = 1'-0"



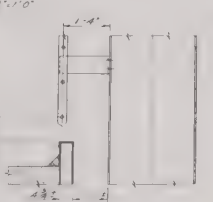
SECTION B-B
Scale 1/4" = 1'-0"



SECTION C-C
Scale 1/4" = 1'-0"

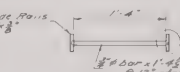


SECTION H-H
Scale 1/4" = 1'-0"

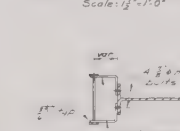


SECTION I-I
Scale 1/4" = 1'-0"

Note: Ladders req'd only on East side of structure - one span ladder at 1 Tower ladder at each Tower



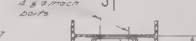
TYPICAL LADDER RUNG DETAIL
Scale 1/4" = 1'-0"



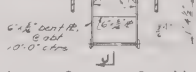
LADDER CONN. TO COL. FLANGE
Scale 1/4" = 1'-0"



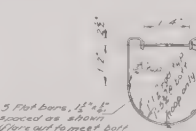
VIEW F-F
(Both span ladders similar)
Scale 1/4" = 1'-0"



VIEW G-G
Scale 1/4" = 1'-0"



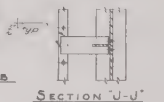
LADDER CONN. TO COL. WEB
Scale 1/4" = 1'-0"



LADDER CASE DETAIL - TYPICAL
Scale 1/4" = 1'-0"



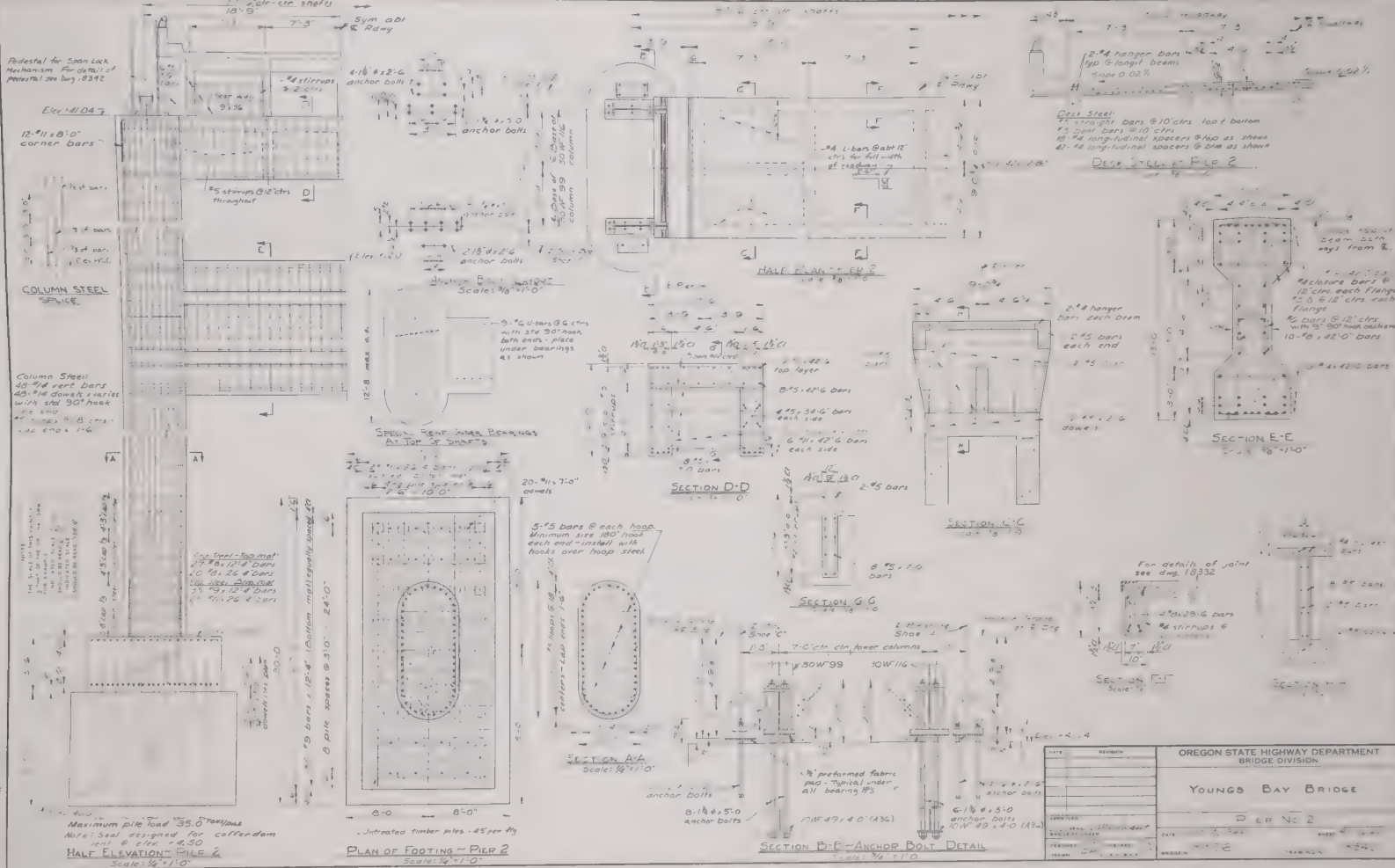
SECTION D-D
Scale 1/4" = 1'-0"



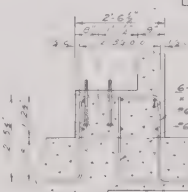
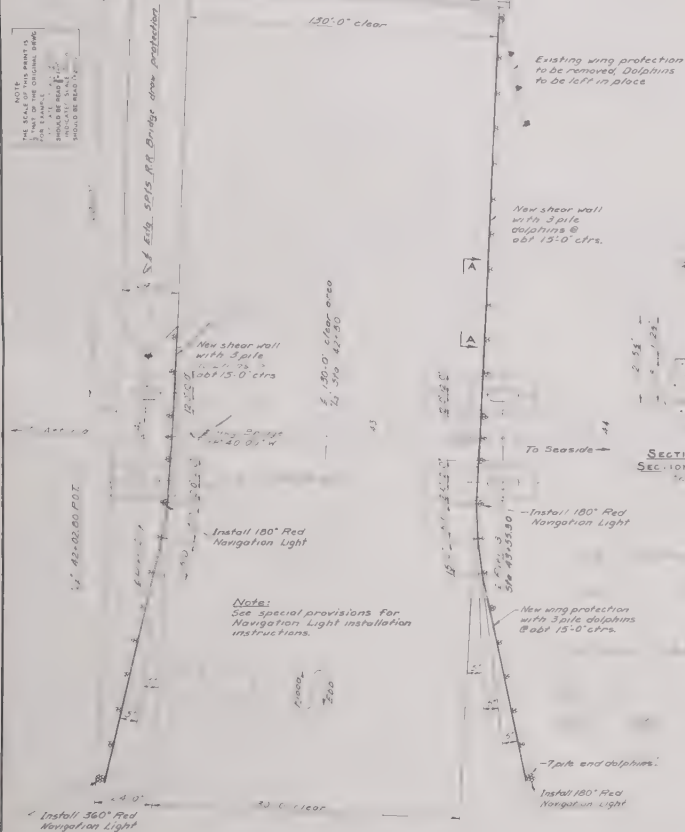
SECTION J-J
Scale 1/4" = 1'-0"

Notes:
All machine bolts shall be furnished & installed with lock washers & heavy hex nuts
All exposed corners on ladders & cages shall be ground smooth
All ladder material and child floor 10 shall be ASTM spec A36
Pipe handrail shall be ASTM spec A20.

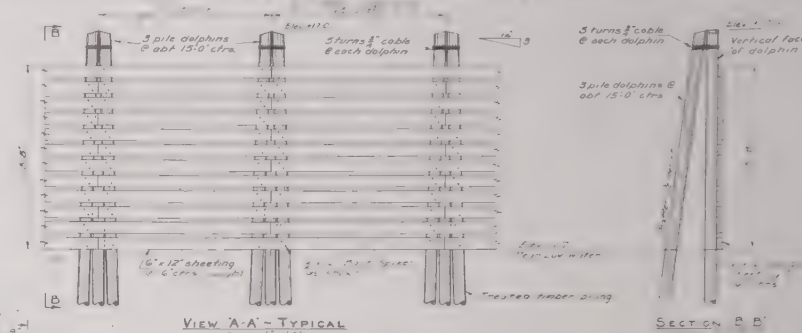
DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
APPROVED:		LADDER DETAILS	
DRAWN BY: M. J. Mendenhall	DATE: 5-1-60	SHEET 18 OF 60	
CHECKED BY: M. J. Mendenhall	DATE: 5-1-60	8306	
DESIGNED BY: M. J. Mendenhall	DATE: 5-1-60	DRAWING NO. 16336	



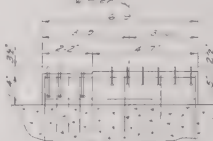
NOTE:
THE BRIDGE SHALL BE
PART OF THE CHANNEL
CUT PROJECT
AND SHALL BE
CONSIDERED AS
A PART OF THE
CHANNEL CUT
PROJECT
AND SHALL BE
CONSIDERED AS
A PART OF THE
CHANNEL CUT
PROJECT



SECTION D-D SHOWN
SECTION E-E SIMILAR
Scale: 1" = 1' 0"



VIEW A-A-TYPICAL
Scale: 1" = 1' 0"

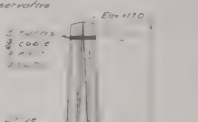


SECTION C-C
Scale: 1" = 1' 0"

Notes:
Pile heads shall be protected as specified in Article 220.7(1) of the OSHD Specifications for Bridges.
All timber shall be Construction Grade (K40) and shall be pressure treated with preservative as required by the specifications.



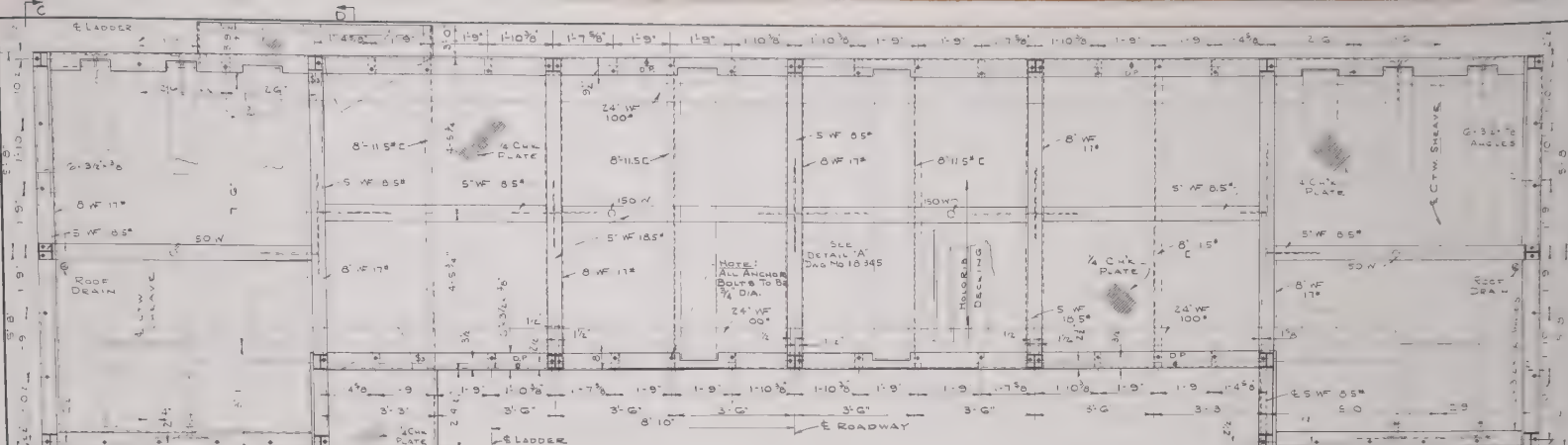
DRIVING CENTERS
3-PILE DOLPHIN
Scale: 1" = 1' 0"



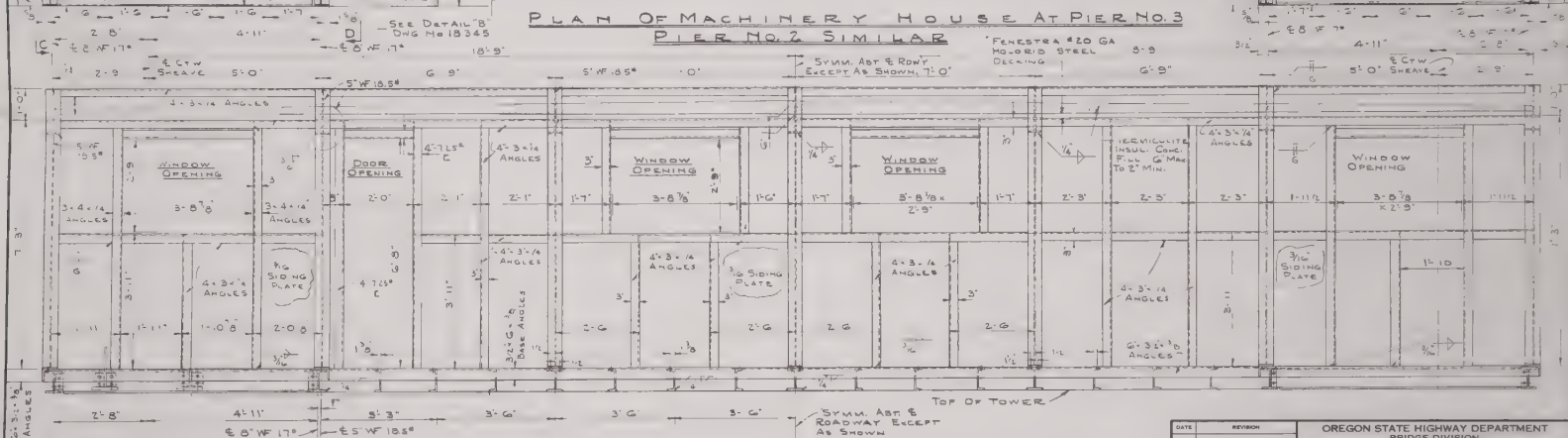
ELEVATION - VERTICAL FACE
3-PILE DOLPHIN
Scale: 1" = 1' 0"

PEDESTAL FOR SPAN LOCKING MECHANISM
(Pier No. 2 Shown, Pier No. 3 Similar)
Scale: 1" = 1' 0"

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
		PIER PROTECTION	
APPROVED		DATE	BY
DESIGNED		CHECKED	BY
DRAWN		SCALE	BY
		BRIDGE NO.	8306
		DRAWING NO.	8342



PLAN OF MACHINERY HOUSE AT PIER NO. 3
PIER NO. 2 SIMILAR

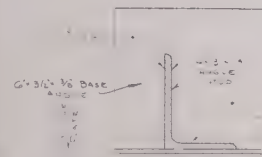
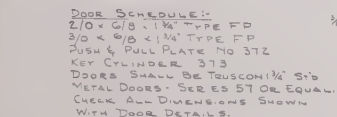


NOTE:
 FOR SECTION 'C-C' & 'D-D'
 SEE DWG. NO. 18344

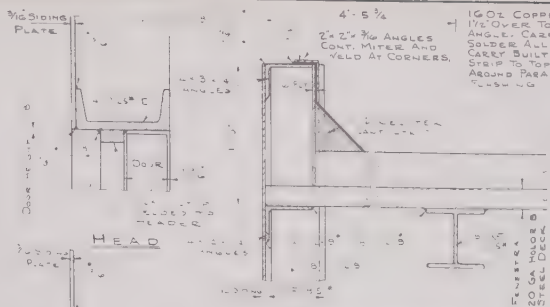
NOTE
 THE SCALE OF THIS PRINT IS
 1/4\"/>

FRONT ELEVATION OF MACHINERY HOUSE AT PIER NO. 3
 SCALE 1/4\"/>

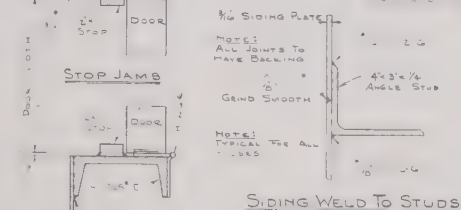
DATE		REVISION	
OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION			
YOUNG'S BAY BRIDGE			
MACHINERY HOUSE			
DATE		SHEET	
OCT 5, 1922		NO. 3 OF 50	
DESIGNED	FG	CHECKED	
DRAWN	FG	CALC. BY	FG
BRIDGE NO. 8506		DRAWING NO. 18343	



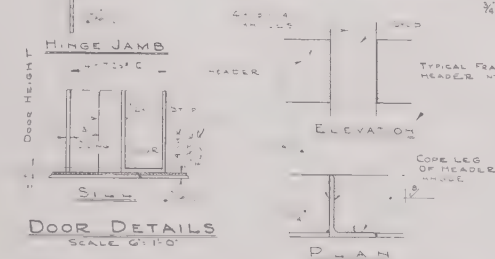
PLAN
TYPICAL METHOD FRAMING
STUD TO BASE ANGLE



TYPICAL SECTION
THRU ROOF

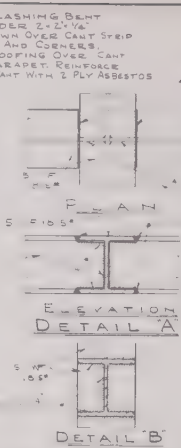


SIDING WELD TO STUDS

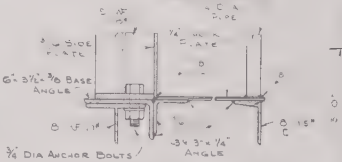


DOOR DETAILS

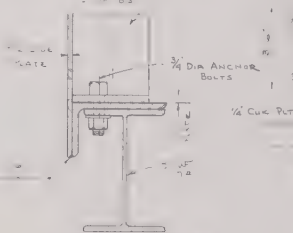
HEADER FRAMING INTO STUDS



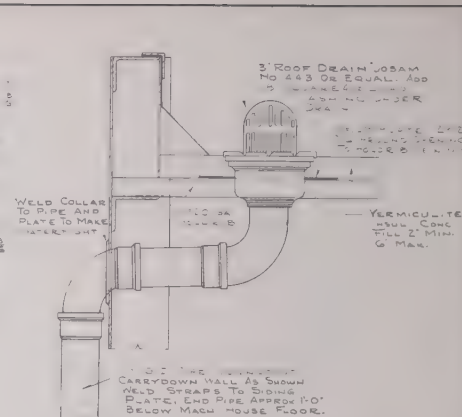
DETAIL "B"



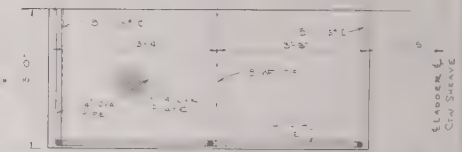
LADDER PLATFORM AT
FRONT OF HOUSE



TYPICAL BASE
DETAIL



TYPICAL ROOF DRAIN



7 4 1 0



FLY. OF PLATEFORM A- BAC. OF 1900.

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNG'S BAY BRIDGE	
APPROVED		MACHINERY HOUSE	
<i>W. L. ...</i>		DATE OCT 11, 52	SHEET 45 OF 50
DESIGNED BY		BRIDGE NO 3306	DRAWING NO 18345
CHECKED BY			

PLAN OF MACHINERY AT PIER NO. 3 TOWER
PIER NO. 2 SIMILAR
SCALE 1/4"=1'-0"

NOTES:

Trade names mentioned below are for dimensional reference only. See special provisions for specific requirements.

- ① PISTON—Cast Steel, 11" pitch dia. 22-20" full depth involute teeth, 4" face, 4 1/2" bore.
- ② GEAR—Cast Steel, 57" pitch dia. 114-20" full depth involute teeth, 3.75" face, 5" bore.
- ③ SPEED REDUCER—Overhung type, Rat's 3:2:1
- ④ MOTORS—Westinghouse, 20 H.P. 3 Phase, 440 volts, 60 cycle, Frame No. 444 U.
- ⑤ MOTOR BRAKE—Westinghouse, A.C. Magnetic brake, frame No. 105 motor mounted.
- ⑥ SHAFT BEARING—Westinghouse, A.C. Magnetic
- ⑦ TURNION BEARING—SKF, SAW-21244-C cast iron spherical roller bearings 3" x 10"
- ⑧ PIN ON SHAFT BEARING—SKF, SAF 2252 G CA-42 Cast iron spherical roller bearing pillow block.
- ⑨ PIN ON SHAFT COUPLING—Philadelphia Spheriflex type K, size 4 1/2"
- ⑩ MOTOR SHAFT COUPLING—Philadelphia Spheriflex type K Size 2.

5'-4" Outside Dia.

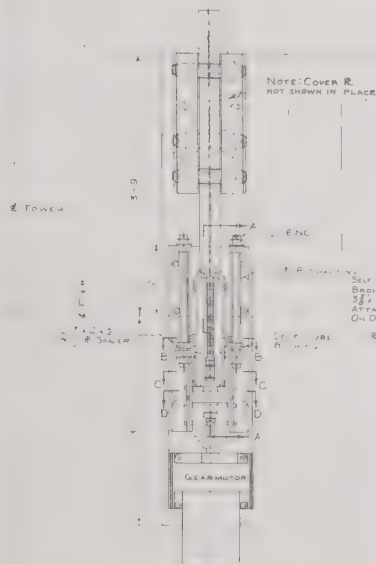
SEE DETAIL B

5'-4" Outside Dia.
5'-0" Pitch Dia.

UNDERWEIGHT SHEAVE DETAILS

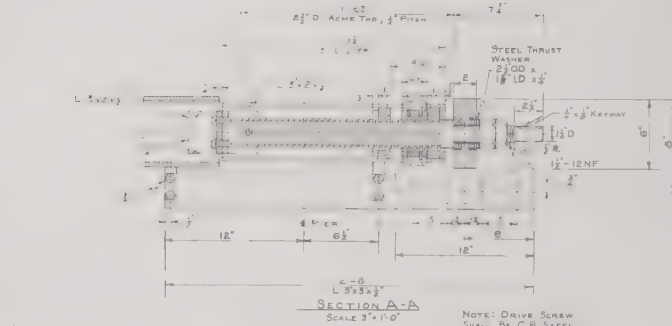
DATE	DESIGNED BY	CHECKED BY
1940	JOHN C. DAY	DR. D. DEL.
PROJECT	MACHINERY AT PIER NO. 3 TOWER	
SCALE	1/4"=1'-0"	
APP. NO.	1000	
DATE	1940	

2-3



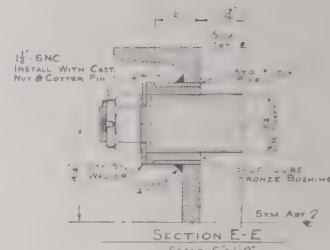
PLAN VIEW LOCK ASSEMBLY
SCALE 1 1/2" = 1'-0"

NOTE: FOUR REQUIRED, ONE THIS AND ONE
OPPOSITE HAND ON PIER 2 & 3

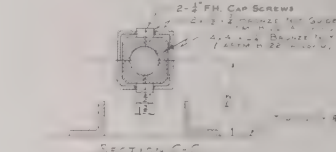


SIDE VIEW LOCK ASSEMBLY
SCALE 1 1/2" = 1'-0"

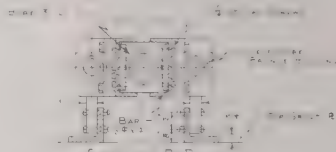
ALL BOLTS, CAP SCREWS AND TAP BOLTS 1/2"
UNLESS NOTED OTHERWISE. USE SAE LOCK
WASHERS UNDER ALL NUTS AND WEE HEADS
OF CAP SCREWS AND TAP BOLTS.



SECTION E-E
SCALE 6" = 1'-0"



SECTION C-C
SCALE 6" = 1'-0"



SECTION B-B
SCALE 6" = 1'-0"

BLADE TO E, BEARINGS
15 OC

TOP GRAB E

SECTION D-D
SCALE 1 1/2" = 1'-0"

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
		SPAN LOCKING MECHANISM	
DESIGNED BY	8306	CHECKED BY	8306
APPROVED BY		DATE	

NOTE
THE SCALE OF THIS PRINT IS
3/4" = 1'-0" OF THE ORIGINAL DRAWING
FOR EXAMPLE
INDICATED SCALE 1/2" = 1'-0"
SHOULD BE READ 1/2" = 1'-0"
INDICATED SCALE 1/4" = 1'-0"
SHOULD BE READ 1/4" = 1'-0"

40' x 24' motor operated
gate metal louvers
see specifications

FRONT ELEVATION

RIGHT ELEVATION

SECOND FLOOR PLAN

FIRST FLOOR PLAN
Scale 1/4" = 1'-0"

REAR ELEVATION

PLATFORM DETAIL

VIEW A-A

RAIL POST

CORNER POST

WINDOW SCHEDULE

- ① ② ③ ④ ⑤ 72" wide x 50" high thermopane
- ① width to suit x 50" high thermopane
- ① ② ③ ④ ⑤ 40" wide x 50" high thermopane
- ① width to suit x 50" high thermopane
- ② 2/0 x 2/8 steel projected sash, glaze DSB clear thermopane - 2 lights of 8" parallel - o-grey plate glass with 1/2" air space (L-O-F Bondermatic)

DOOR SCHEDULE

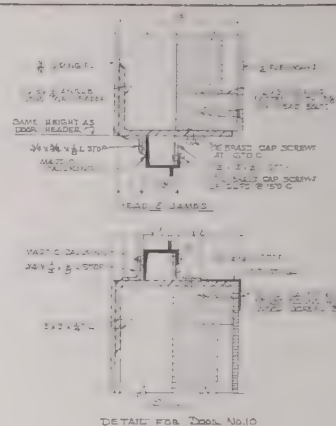
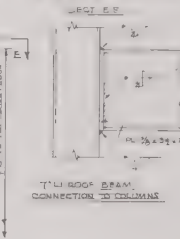
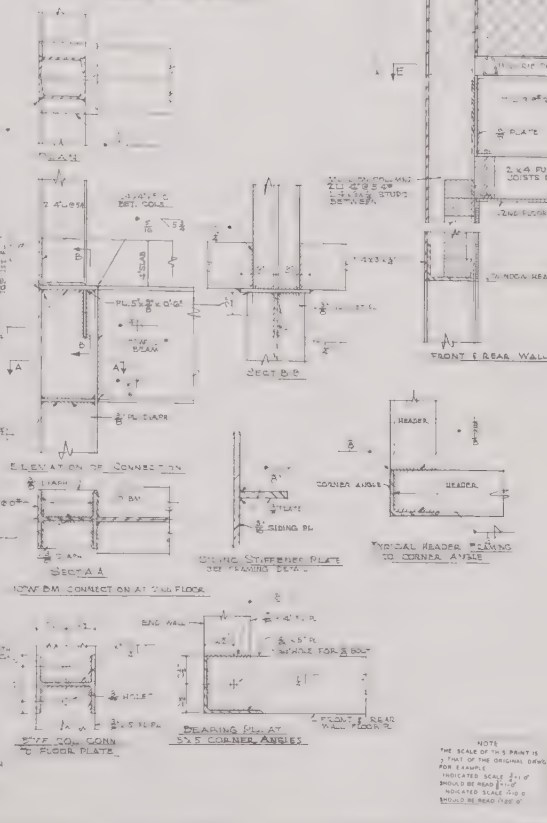
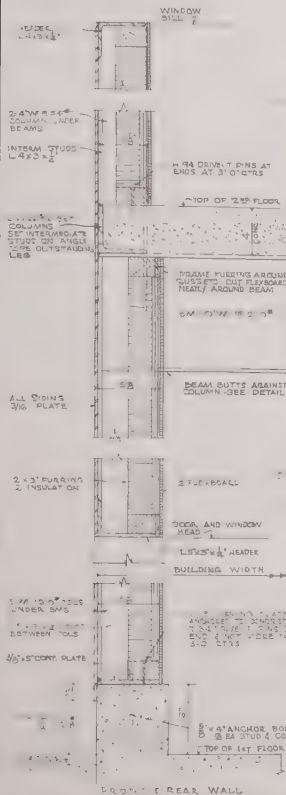
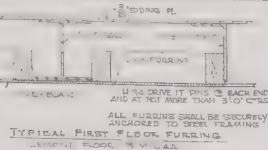
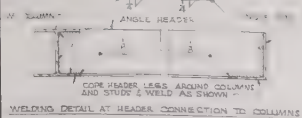
- ① ② ③ ④ ⑤ 2/0 x 7/0 x 1/8 ceco No. F-2670 G glass 8" parallel - o-grey plate, complete weather strip No. 4221
- ② 2/8 x 7/0 x 1/8 ceco No. F-5470 G, No. 4411 astragal parallel - o-grey plate, complete weather strip No. 4221
- ③ 2/0 x 6/8 x 1/8 wood slab

LEGEND

- FA - 2nd floor fresh air louvers
- EX - 2nd floor ceiling exhaust ventilator
- Rad EX - 1st floor exhaust (per specs)
- Metal Louver - 1st floor (per specs)

DETAIL OF WALL LADDER

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
APPROVED			
DESIGNED BY	W. J. B. B. B.	DATE	
DESIGNED BY		APPROVED BY	
DESIGNED BY		APPROVED BY	



NOTE
THE SCALE OF THIS PRINT IS
3/4 THAT OF THE ORIGINAL DRAWING
FOR EXAMPLE
INDICATED SCALE 1/4" = 1'-0"
SHOULD BE READ 1/8" = 1'-0"
INDICATED SCALE 1/8" = 1'-0"
SHOULD BE READ 1/16" = 1'-0"

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION
APPROVED:		YOUNGS BAY BRIDGE
<i>[Signature]</i>		
DESIGNED BY: <i>[Signature]</i>		PROJECT NAME: WALL FORTING
DRAWN BY: <i>[Signature]</i>	CHECKED BY: <i>[Signature]</i>	DATE: 1-8-70
		BY: M. J. P.

4-1/2" x 1/2" ANGLE BRACKET
2-1/2" x 1/2" BRACKET

4-1/2" x 1/2" ANGLE BRACKET
2-1/2" x 1/2" BRACKET

4-1/2" x 1/2" ANGLE BRACKET
2-1/2" x 1/2" BRACKET

4-1/2" x 1/2" ANGLE BRACKET
2-1/2" x 1/2" BRACKET

4-1/2" x 1/2" ANGLE BRACKET
2-1/2" x 1/2" BRACKET

4-1/2" x 1/2" ANGLE BRACKET
2-1/2" x 1/2" BRACKET

DETAIL FOR WINDOWS 740
ALL WELDING & RULING DETAILS
SAME AS SHOWN FOR PLUMB GASK

SECOND FLOOR WINDOW DETAILS
SCALE 1/4" = 1'-0"

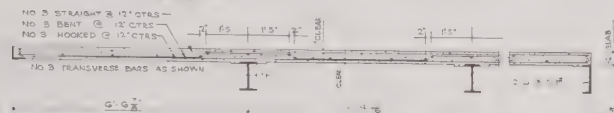
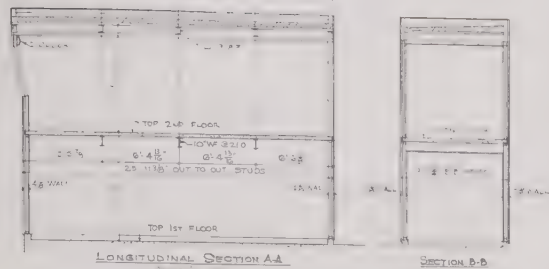
DETAIL AT FLEXBOARD JOINTS

SILL DOORS "E" & "D"

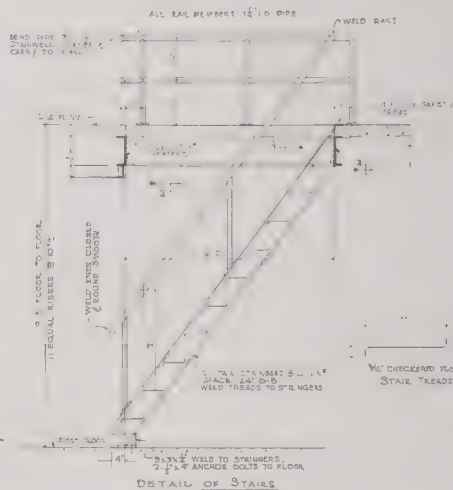
NOTE
ALL LUMBER SHALL BE PRESSURE TREATED CONIST GRADE
WHERE SIMILAR DETAILS ARE INDICATED SAME CONSTRUCTION
AND MATERIALS SHALL OBSERVE FOR LIKE CONDITIONS
CONTRACTOR SHALL VERIFY ALL DIMENSIONS & DETAIL
WITH WINDOWS & DOORS BEFORE FRAMING

NOTE
THE SCALE OF THIS DRAWING IS
1/4" = 1'-0"
INDICATED SCALE
SHOULD BE READ 1/4"

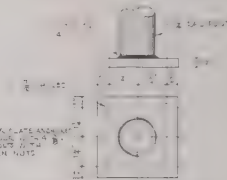
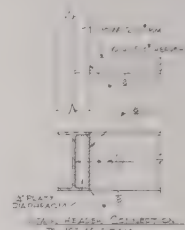
DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION
		YOUNGS BAY BRIDGE
		OPERATORS HOUSE - WINDOW DETAILS
DATE	BY	SCALE



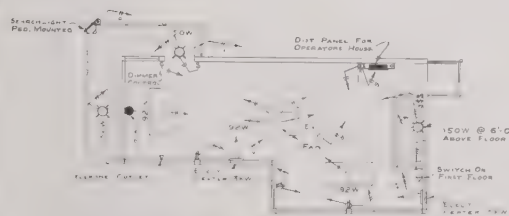
SECOND FLOOR SLAB



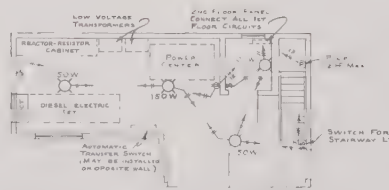
DETAIL OF STAIRS



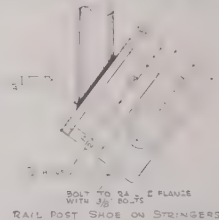
RAIL POST PLATE DETAIL



SECOND FLOOR LIGHTING PLAN



FIRST FLOOR LIGHTING PLAN



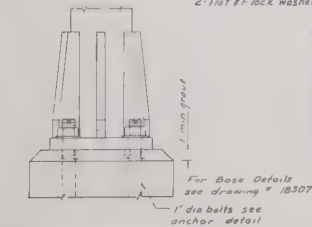
RAIL POST SHOE ON STRINGERS

NOTE
THE SCALE OF THIS DRAWING IS
3/4\"/>

DATE	REVISED	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
APPROVED	DESIGNED	OPERATORS HOUSE - NEW DETAILS	
DATE	DATE	DATE	DATE
DESIGNED	DESIGNED	DESIGNED	DESIGNED
DRAWN	DRAWN	DRAWN	DRAWN

1/2" hole for
1/2" pipe for
conduit reducer
bushing weld
into pipe

Conduit from JB to base & place bushing
in JB not further than 5'
from column



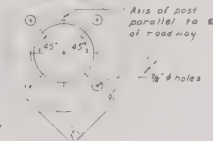
ELEVATION
BASE PLATE

NOTE
THE SCALE OF THIS PRINT IS
3/4 THAT OF THE ORIGINAL DRAWING
FOR EXAMPLE
INDICATED SCALE 1/2" = 1'
SHOULD BE READ 3/4" = 1'
INDICATED SCALE 1/4" = 1'
SHOULD BE READ 3/8" = 1'

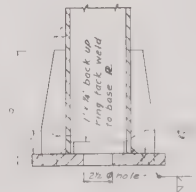
Galvanize entire frame
after road coating.
All galls, rivets & washers
to be galvanized also.

Conduit may be
fastened thru either
Post

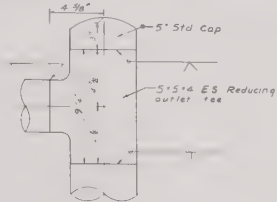
3/4" @ bolts with
hard hat nut
2 flat black washers



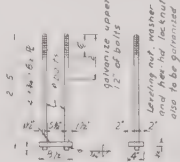
DETAIL B
Scale 3/4" = 1'-0"



SECTION A-A
Scale 1/2" = 1'-0"



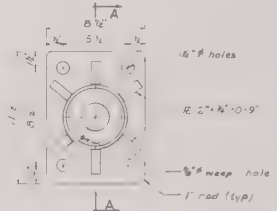
DETAIL C
Scale 3/4" = 1'-0"



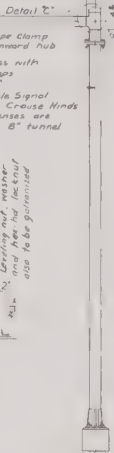
ANCHOR DETAIL
Scale 1/2" = 1'-0"

ELEVATION
Scale 1/2" = 1'-0"

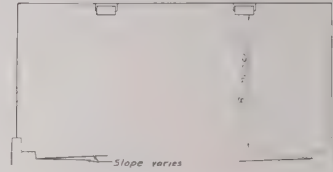
P L A N
Scale 1/2" = 1'-0"



P L A N
BASE PLATE
Scale 1/2" = 1'-0"



Signal heads are Eagle Signal
Corp. Type S1374003 or Graess Hinds
H50-15 or equal. Lenses are
to be 12" in dia with 8" tunnel
risers.



OVERHEAD SUPPORT FOR SIGNAL LIGHTS At STA 31+75 37+27 47+03 & 52+57

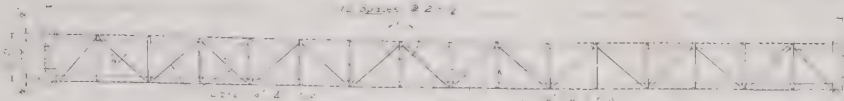
STA	LENGTH
31+75	11'-0"
37+27	FR. G. FR.
47+03	FR. G. FR.
52+57	FR. G. FR.

Note:
See specifications for all details
not shown.

GENERAL NOTES
Structure designed for wind velocity of 100 MPH
All pipe members shall be seamless from steel pipe
conforming to ASTM A53 Type S Grade B (11,2000psi)
All structural steel except pipe, shall conform to
ASTM A36 (11,2000psi)
Structure designed for dead load plus windload with
with an allowable stress of 165 % 28000psi.
Post and base steel shall not be lap-jointed until
final elevations have been determined in the field.
All materials and workmanship shall conform to the
specifications for bridges of the Oregon State
Highway Commissions.

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
		SIGNAL LIGHT SUPPORT	
DESIGNED BY	W. J. M. M. M.	DATE	10-8-62
DRAWN BY	W. J. M. M. M.	CHECKED BY	W. J. M. M. M.
DATE	10-8-62	BRIDGE NO.	8306
		DRAWING NO.	18356

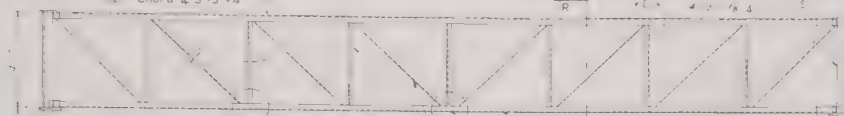
1. Spacing 2'-2"



D A N

2. Spacing 2'-2"

Top Chord L 3'3" x 1/4"



Web L 2'10" x 1/4" (typ)

Bottom Chord L 3'3" x 1/4"

Parabolic camber of 1/4" @ c/c of span. Locate into truss.

3/16" bolt bend as shown with hex hd & lock washer

DETAIL 'G'

Scale 1" = 0'

SECTION 'R-R'

Scale 1" = 0'

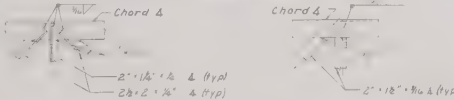
SECTION 'S-S'

Scale 1" = 0'

NOTE
THE SCALE OF THIS PRINT IS 1/4" = 1'-0" OF THE ORIGINAL DESIGNS FOR EXAMPLE INDICATED SCALE 1/4" = 1'-0" SHOULD BE READ 1/4" = 1'-0" INDICATED SCALE 1/4" = 1'-0" SHOULD BE READ 1/4" = 1'-0"

ELEVATION

Scale 1" = 0'



DETAIL 'C'

DETAIL 'D'

2 1/2" x 1/4" x 11/16"

DETAIL 'B'

Scale 1" = 0'

1/4" x 1/4" x 10" Filler R
1/4" high strength bolts with hex hd nut & lock washer

2-R 1/4" x 13'-0" x 6"

3/8" holes

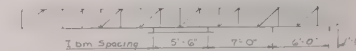
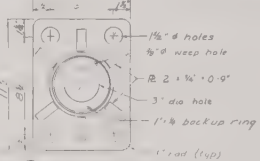
DETAIL 'H'

Scale 1" = 0'



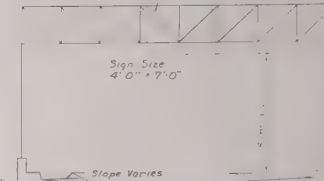
Cutoff heel of gusset R 1/4" x 45" (typ)

SECTION 'J-J'



1. b.m. Spacing 5'-6" 7'-0" 6'-0"

Sign W 302-48, Type 'D'



Sign Size 4'-0" x 7'-0"

Slope Varies

OVERHEAD SUPPORT FOR SIGNS

AT STA 27+83 & 55+94

For all details not shown see specifications.

GENERAL NOTES

Structure designed for wind velocity of 60 MPH
All structural steel, except pipe, shall be weldable carbon steel and shall conform to ASTM A 36 (4-20,000 psi)
All pipe members shall be fabricated from steel pipe conforming to ASTM A 53, Type S Grade B.
Structure designed for dead and live load with an allowable stress of 145 ksi = 29,000 psi.
Prest and base steel shall not be fabricated until final elevations have been determined in the field.
All materials and workmanship shall conform to the specifications for bridges of the Oregon State Highway Commission.

DATE	REVISION	OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
		YOUNGS BAY BRIDGE	
		OVERHEAD SIGN SUPPORT	
DESIGNED BY	W. J. G. G.	DATE	2-2-62
CHECKED BY	W. J. G. G.	PROJECT NO.	6306
DATE	2-2-62	DESIGNED BY	W. J. G. G.
		BRIDGE NO.	18357

Height of post to be determined

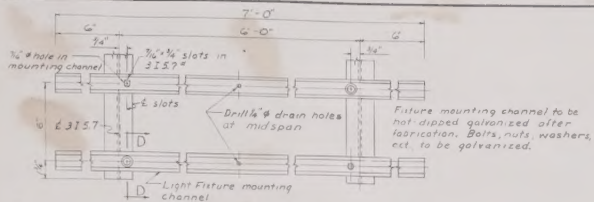
Conduit from Junction Box to Base B. Place bushing @ Base B. Locate JB not farther than 2' from Base B. Conduit may be placed in either post.

1/4" bolts see anchor detail dwg # 8358

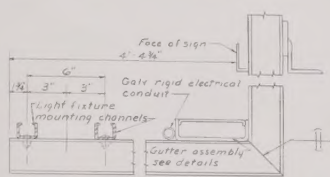
1/4" bolts see anchor detail dwg # 8358

By 2/2/62, 2/2/62, 2/2/62
Drawing # 8358

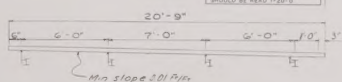
ELEVATION
DATE 2-2-62



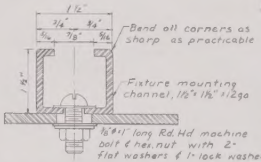
FIXTURE MOUNTING DETAILS



SUPPORT ARM ASSEMBLY
Scale 3" = 1'-0"

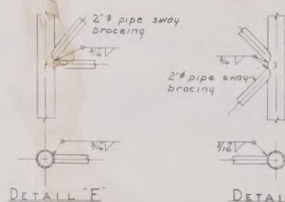


Gutter may be fabricated in sections and brazed or welded together in the field.

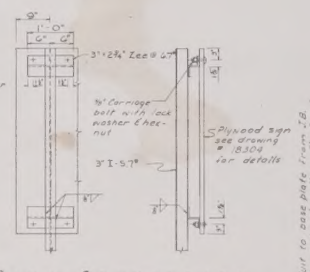


SECTION 'D-D'
Scale 1" = 9'-1"

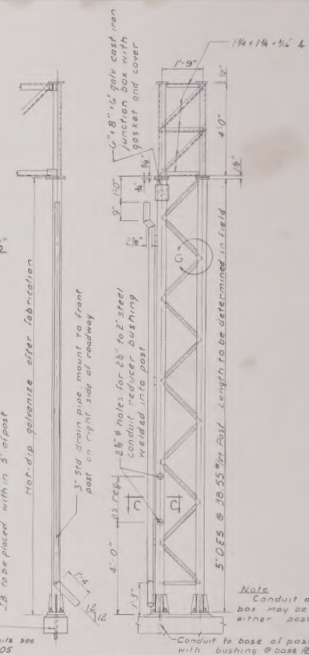
Note:
Gutter assembly to be hot-dipped galvanized.
Galy. weld over field weld in all cases where galy. sections are welded in field.



DETAIL "F"



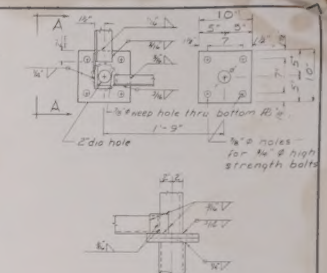
SIGN CONNECTION
Scale 1" = 1'-0"



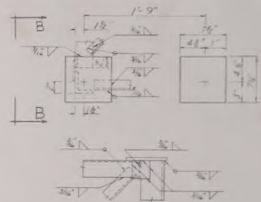
POST ELEVATIONS
Scale 1/4"=1'-0"

Electrical Notes

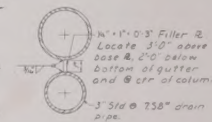
- Electrical Wiring**
- 2. All wiring shall be attached to reduce pushing by chase nipple and locknuts.
 - 3. Circuits from junction box to 1" rigid conduit shall be carried inside 1" rubber covered flexible conduit.
 - 4. Circuits from rigid conduit to sign luminaires shall be carried inside 1" rubber covered flexible conduit.
 - 5. Circuits from ballast to luminaires shall consist of No. 14 gauge machine tool wire.
 - 6. All other wiring and other appendances shall be carried inside 1" rigid conduit.
 - 7. Ballasts shall be remotely mounted in a No. 12 gauge, ventilated, weather proof steel cabinet.
 - 8. The cabinet shall be mounted on the wall. Ballasts shall be mounted to the cabinet.
 - 9. More than one cabinet shall be used if necessary.
 - 10. Rigid conduit fittings shall be used between



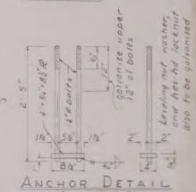
SECTION "A-A"
BOTTOM GUSSET PLATES
Scale: 1/4" = 1'-0"



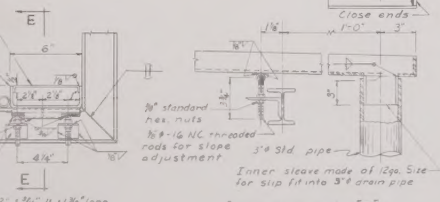
SECTION B-B



SECTION C-C
Scale 3" = 1'-0"



ANCHOR DETAIL



GUTTER DETAILS
Scale: 3" = 1'-0"

BALLAST CABINET
No Scale

DATE		REVISION		OREGON STATE HIGHWAY DEPARTMENT BRIDGE DIVISION	
				YOUNGS BAY BRIDGE	
APPROVED:		SIGN SUPPORT DETAILS			
<i>W. J. M. M. M.</i>		DATE: 10-8-62		SHEET 38 OF 60	
ENGINEER		CHECKED: <i>B. A.</i>		DRAWING NO. 18355	
DESIGNED: <i>W. J. M. M.</i>		BRIDGE NO. 6306		LOCATION: (SEE MAP)	

OREGON STATE HIGHWAY DEPARTMENT
BRIDGE DIVISION

YOUNGS BAY BRIDGE

SIGN SUPPORT DETAILS

DATE 10-8-62 SHEET 50 OF 6

DRAWING NO. 18358

